SOUTHERN RHODESIA.

REPORT

on the

PUBLIC HEALTH

For the Year 1948

Presented to the Legislative Assembly
1949

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Report on the Public Health for the Year 1948

Health Department, Salisbury.
29th March, 1949.

The Minister of Health.

Sir,

I have the honour to submit the Annual Report of the Health Department for the year 1948.

I have the honour to be, Sir, your obedient servant,

R. M. MORRIS, O.B.E., M.D., D.P.H.,
Secretary for Health, Medical Director and Chief Health Officer.

INTRODUCTION.

The most important feature of the year 1948 was the attainment in April of full Divisional Status under the Minister of Health. For this reason it is not inappropriate that this Report should set forth the main lines of the new organisation and of the accepted policy of the Division of Health.

As Executive officer to the Minister, the Secretary for Health has the assistance of a Director of Curative Services and a Director of Preventive Services. There is also a Departmental Committee on Research and a Nutrition Council.

The Director of Curative Services deals with:—

(a) the provision, equipment and staffing of the Government Hospitals, maternity homes and clinics;
(b) Government medical service;
(c) through the Staff Matron, nursing services in institutions and in the District Nursing Service;
(d) Laboratory services;
(e) Military and Police medical services;
(f) Military and civil Pensions Board;
(g) Liaison with other agencies providing curative services such as missions and mines;
(h) Training of nurses, nursing orderlies and maternity assistants;
(i) Workmen's compensation (medical aspects);
(j) Medical examinations of Aircrews.

The Director of Preventive Services deals with:—

(a) Liaison with local authorities:
(b) Environmental hygiene outside municipal areas;
(c) Inspection of food, meat, premises, slaughter houses, etc.;
(d) Schools medical services;
(e) Schools dental services;
(f) Nutrition Service;
(g) Control of epidemics and infectious diseases including surveillance of immigrants from areas outside the Colony where infectious diseases may be prevalent;
(h) Industrial hygiene;
(i) Research Laboratories;
(j) Training of Native Hygiene demonstrators;
(k) Public health aspects of Town and Country Planning.

Curative Services.

General Hospitals: In the main the accepted policy is to build up large hospitals with every modern facility for diagnosis and treatment in the two chief centres of population with similar but less elaborate provision in the other large towns. Unfortunately it is not possible strictly to adhere to this policy since in many rural areas the local population demands inpatient

facilities near at hand. These are provided by small cottage hospitals which are of necessity an extravagant method of covering the needs of the public since the maintenance costs are relatively high and the range of service comparatively restricted. Nevertheless where the rural centre is more than 50 miles from other inpatient facilities the local demand is not resisted and a programme of building 12-bedded European Hospitals has been adopted. Unfortunately with the present state of the building industry many difficulties have been encountered in translating these plans into realities. Despite these difficulties, the new European Hospital at Chipinga is almost ready for opening and work is progressing, disappointingly slowly but steadily, on the African maternity hospitals in Bulawayo and Salisbury, the new African outpatient clinic in Salisbury and the Martin Tuberculosis Sanatorium for Africans at Mkumbi.

Maternity Homes: A similar policy has been adopted for maternity homes under Government control and the most urgent need in this respect at the present time is to increase the facilities for Europeans in Salisbury and Bulawayo as soon as possible. In particular there is a need for similar facilities for Coloureds and Asiatics in all the main centres. In so far as Salisbury is concerned it is hoped to provide for this need in a wing of the proposed new general hospital for these sections of the public.

Clinics: The clinic system for Africans has proved such a success that the Department is in danger of being swamped by requests for clinics in all areas. It has therefore become essential to adopt a policy whereby no clinic will be accepted for the immediate programme where the site is less than 20 miles from existing curative facilities. It is also necessary to consider the problem of supervision. This is effected by having a main clinic or hospital at the home station of the Medical Officer, who should not be asked to supervise more than three sub-clinics. A further point in the accepted policy is to endeavour to keep the number of clinics provided in European areas equal to those in Native Reserves and native purchase areas. The Department has frequently to face problems from the indirect pressure brought to bear by the offer of some relatively trifling assistance such as the free gift of a small piece of land on which a clinic worth £7,000 is to be erected and maintained in perpetuity. Although the inevitable refusal often leads to ill-feeling, no other course is open to the Department.

Medical Services: The curative division of the Government medical service has been steadily expanded. To a large extent the Government medical officer is employed on general clinical duties including supervision of Hospitals and clinics but some specialist officers, Radiologists, Psychiatrists, Bacteriologists, Pathologist and Leprologist are also employed. The aim is ultimately to have at least one medical officer in each native district. At present the general duty medical officer is entitled to private practice when stationed outside Salisbury and Bulawayo since in no other way can medical services be assured in the rural areas. As and when private practitioners are available, the Government medical officers' posts will be made whole-time. The first step in this direction will become effective as from April 1st next when Umtali, Gwelo, Gatooma and Que Que will become additional full-time appointments.

Nursing Services: The recruiting of nursing staff is controlled by the Staff Matron. The majority of trained staff are recruited in England through the kind offices of the Nursing Panel of the Society for the Overseas Settlement for British Women. The remainder are mainly recruited from the Union of South Africa, with a few nurses trained in the Colony also available for duty. The position with regard to recruiting has eased considerably but the wastage, almost entirely occasioned by marriage, remains at a very high level.

Recruits for student nurse training offer in a fairly satisfactory way, but here again the wastage is unduly high. The resignations are very largely on marriage. The majority of the trained staff are employed in institutional nursing, but it is a definite policy steadily to enlarge the District Nursing Service which plays a very useful part in promoting health in the rural areas.

Laboratory Services: The main laboratories are in Salisbury and Bulawayo where they not only serve the purpose of carrying out all the major routine investigations but also provide training schools for European medical laboratory technicians. They also train African microscopists for service at the major clinics. Subsidiary laboratories are located in Gwelo and Umtali with trained laboratory technicians in charge. It is hoped in due course to extend the range of these existing laboratories and to provide others at suitable centres.

The work of the Government Analyst's Department referred to in more detail in the body of this report has grown very considerably and the present quarters are quite inadequate for the extremely important public health and medico-legal work done.

Another major need is for more adequate facilities for medical research. The existing Bilharzia Research Laboratory is very satisfactory for its own purpose but there is no other laboratory in whieh research workers can be accommodated. This is the more unfortunate as offers are now being received from such workers to come to Southern Rhodesia to deal with specific problems.

Liaison with other Agencies: The effeet of the enhanced rates of finaneial assistance to Medical Missions introduced under Government Notice No. 142 of 1947 has been satisfactory in every way. One exeellent result is that there are now 14 medieal praetitioners in the Mission field compared with six under the previous arrangements. The assistanee now given towards eapital expenditure on mission hospitals has greatly improved the buildings and general amenities and the insistenee on proper trained supervision as a primary qualifieation for the increased assistance has helped greatly in raising standards to a high level.

Training Schools: The training schools for male Afriean nursing orderlies at Salisbury and Bulawayo, for female African nursing assistants in Bulawayo and the sehool for female African maternity assistants in Umtali, which are all maintained by the Department, are suceessfully turning out a stream of trained workers for the Clinics. Whilst the standard is possibly not quite as high as might be desired, the scheme has proved a very good beginning to the ultimate solution of the pressing problem of providing services to the African population by training seleeted members of the African community. The better faeilities which the new native hospitals, now building, will provide should enable a standard equal to that of the European training schools to be attained.

With the increased assistanee to medical missions, at least one has been able to raise the level of nursing orderly training to Southern Rhodesia Medical Council standard. It is hoped that others will follow in due course. The remaining medical missons train orderlies for an examination arranged by the Department of Health.

Preventive Services.

Local Authorities: With financial assistance from the Government through the Votes of the Department of Health the municipalities carry their own share of preventive serviees. With only one or two possible exceptions, the work is of a very high order of effieiency.

It is fitting to record here the loss sustained by Public Health in the Colony by the death of Dr. A. H. Shennan, M.D., D.P.H., who had been Medical Officer of Health to the City of Bulawayo for 14 years.

Outside the municipalities the smaller local government units are seriously handicapped by lack of funds for the payment of trained staff. Partially to offset this the serviees of Government Health Inspectors are loaned to the majority of the Town Management Boards. Under the projected scheme for Urban District Counеils this idea will be further developed. The Department of Health will recruit trained staff and second them to the Councils, thus ensuring staff a professional career without having to resign and seek fresh appointment.

Outside the local authority areas, the Government Medical Officer is by virtue of Section 9 of the Public Health Act, the medical offieer of health. He makes use of the professional service of the members of the Health inspectorate. The future policy in this respect is to divide the Colony into five regions—each with a Regional Medical Offieer of Health, a Senior Health Inspeetor and a subordinate staff. A commencement has already been made in Matabeleland and the seheme will be extended as funds permit and aceommodation is available. The training school at Domboshawa for African Hygiene Demonstrators has turned out two classes of these useful assistants. Their training is a very practical one covering rural or field hygiene and they are appointed in pairs to work in Native Reserves, especially in the Native townships now building in those areas. The reports on their first year's work are very encouraging.

The Schools Medical and Dental Services were strengthened by further appointments during the year but even the additional staff find it difficult to cope with the rapidly increasing work. In 1949 a start will be made with a service of school nurses to work in collaboration with the schools' medical officers and dental surgeons. They should prove useful in following up cases and arranging for recommended treatments to be carried out.

The Nutrition services which provide extra milk and other foods for school children is still handicapped by lack of suitable milk supplies outside the larger townships. Children do not willingly drink boiled milk and rural schools have no opportunity to buy satisfactory pasteurised supplies. It is regretted that the projected nutrition surveys of selected sections of the population in native reserves has had to be temporarily postponed for lack of funds.

Throughout the year 1948 work by the Bilharzia Research unit has been directed towards the solution of the difficulties in the use of Miracil D as an oral treatment of schistosomiasis. It is hoped that these will be finally resolved early next year by a field trial on a reasonably large scale. This trial will be synchronised with copper sulphate treatment of all snail-infested waters in the same area. The lack of response by landowners to the offer by the Department of Preventive Services of free copper sulphate to those who will undertake to use it for snail control is a matter which it is hoped to rectify in the future by wider publicity. It is obviously wasteful to cure patients who then return to work an immediately become infected because their water supplies are not treated or controlled.

The malaria research unit has continued to work on the effects of residual spraying with D.D.T. as a prophylactic against anopheline mosquitos. It is hoped that in the near future funds will become available for extended field trials, on a block system of control. Experiments with gammexane against *O. moubata* have achieved considerable success and its use has been extended to several rural institutions where native staff and some patients still prefer to live in their traditional type of native hut.

The year 1948 proved therefore to be one of steady progress in spite of many difficulties especially in the provision of new buildings. Nevertheless a keen and efficient staff has demonstrated that excellent work can be done in circumstances which are not always ideal.

CHAPTER I.—VITAL STATISTICS.

(1) *African Census.*

A most important advance has been made in African vital statistics. For many years the Director of Census and Statistics has been endeavouring to organise the collection of reliable demographic information of the African population but these have hitherto been frustrated by the illiteracy of the African and the impossibility of employing sufficient Europeans for this task. The revolutionary progress which has been made in the past 25 years in the science of sampling has produced an effective tool for the purpose. The plans were submitted to the U.N. Sub-committee on Sampling and received an encouraging reception. A pilot sample survey was made in 1947 by the staff of the Central African Statistical Office and the plans for a full-scale sample survey were perfected.

In 1948 a full-scale African sample census was organised by the Central African Statistical Office with 25 field officers. The accuracy of the sample was ensured by arranging inter-penetrating samples which enabled the work of each officer to be checked against that of two others. The subjects covered in the census were total population by age and sex and native district, visitors, absentees, births, deaths, deaths of infants under one year, age distribution above and below puberty and the fertility of African females.

Provisional results estimate the total population of indigenous Africans to be on 31st August, 1948, 1,607,000 $\pm$ 42,000 of which 322,500 were in the European area and 31,700 absent in territories outside the Colony. The sex ratio was 1,009 males per 1,000 females; 519 per 1,000 males and 495 per 1,000 females being under the age of puberty. The other vital statistical indices are now being analysed. Plans are under consideration to hold a similar enquiry in Northern Rhodesia and Nyasaland and in this Colony at triennial intervals.

(2) *Population of Southern Rhodesia.*

The population is estimated at 30th June each year.

	1948	1943	1939
Europeans	103,000	81,470	60,720
Asiatics	3,280	2,790	5,840
Coloured Persons	4,880	4,040	
Natives	1,866,000 (a)	1,488,000	1,370,000
Total	1,977,160	1,576,300	1,436,560

(a) provisional.

(3) *Summarised Vital Statistics.*

The vital statistical information concerning the European population is given below and compared with the data of five and ten years ago.

	1948	1943	1939
Estimated European population	103,000	81,470	60,720
Rate of natural increase per 1,000	19.7	14.8	13.8
Gross number of immigrants	16,932	473	3,281
Number of European births	2,853	1,878	1,433
Illegitimate births included above	34	33	27
Annual Birth Rate per 1,000	27.7	23.1	23.6
Number of European Deaths	821	712	597
Crude death rate per 1,000	8.0	8.7	9.8
Number of Infant deaths	92	75	65
Infant mortality rate per 1,000 live births	32	40	45
Number of still births (not included in births and deaths)	41	31	23
Number of Maternal Deaths	4	7	3
Maternal mortality rate per 1,000 live births	1.4	3.7	2.1

(4) *European Birth Rates.*

Southern Rhodesia	27.7	23.1	23.6
England and Wales	17.9	16.2	15.0
Union of South Africa		26.2	25.4

(5) *European Infant Deaths.*

(I) Causes of Death, 1939-48.

Disease.	No. of Deaths	Percentage of Total
Premature birth and diseases of early infancy	433	55.37
Bronchitis and pneumonia	62	7.94
Diarrhoea and enteritis	92	11.76
Malaria	53	6.78
Measles, whooping cough, diphtheria, dysentery	29	3.70
Various, not classified above	113	14.45
	782	100.00

(II) Deaths during different months, 1939-48.

Disease.	No. of Deaths	Percentage of Total
First month	438	56.01
2 months to 6 months	202	25.83
6 months to 12 months	142	18.16
	782	100.00

(III) Infant Mortality Rates.

Rate per 1,000 live births—	1948	1943	1939
Southern Rhodesia	32	40	45
England and Wales	34	49	50
Union of South Africa		48	50

(IV) Causes of Infant Death, 1948.

International List No.	Cause of Death.	No. of Deaths
9	Whooping cough	1
27	Dysentery	2
28	Malaria	6
33	Influenza	1
66	Other general diseases	2
72	Haemorrhagic conditions	1
76	Other diseases of the blood and blood-forming organs	1
80	Encephalitis (non-epidemic)	2
81	Meningitis (non-meningococcal)	1
84	Mental disorders and deficiency	1
86	Convulsions in children under 5 years of age	1
90	Pericarditis	2
107	Broncho-pneumonia	3
108	Lobar pneumonia	2
119	Enteritis and diarrhoea	5
122	Hernia, Intestinal obstruction	2
125	Other diseases of the liver	1
157	Congenital malformations	6
158	Congenital debility	2
159	Premature birth	29
160	Injury at birth	6
161	Other diseases peculiar to the first year of life	11
182	Accidental mechanical suffocation	2
200	Cause of death unstated or ill-defined	2
		92

(6) *European Deaths.*

(I) European Death Rates per 1,000.

	1948	1943	1939
Southern Rhodesia	8.0	8.7	9.8
England and Wales	10.8	13.0	12.1
Union of South Africa		9.5	9.4

(II) Causes of European Death, 1944-48.

	1948	1947	1946	1945	1944	Total	Percentage of Total Deaths
1.—Cancer	97	108	86	94	95	480	13·16
2.—Violence	81	70	53	73	108	385	10·55
3.—Heart Diseases	165	123	127	137	112	664	18·20
4.—Pneumonia and Bronchitis	35	26	41	38	41	181	4·96
5.—Malaria and Blackwater Fever	32	25	34	33	44	168	4·61
6.—Nervous Diseases	75	70	75	51	52	323	8·85
7.—Premature Birth and Diseases of Early Infancy	55	62	38	38	48	241	6·61
8.—Tuberculosis (all forms)	23	8	11	12	19	73	2·00
9.—Influenza	4	3	8	7	4	26	0·71
10.—Diarrhoea and Enteritis	8	18	5	16	16	63	1·73
11.—Old Age	11	10	16	11	11	59	1·62
12.—Enteric Fever	4	2	4	3	2	15	0·41
13.—Diphtheria	1	1	4	6	3	15	0·41
14.—Dysentery	5	2	1	4	6	18	0·50
15.—Whooping Cough	2	4	—	5	1	12	0·33
16.—Measles	1	—	1	—	1	3	0·08
17.—Scarlet Fever	—	—	—	—	—	—	—
18.—Other Causes	222	186	183	159	172	922	25·27
TOTAL	821	718	687	687	735	3,648	100·00

(7) *Maternal Mortality.*

European Maternal Deaths, 1939-1948.

	No. of Deaths	Percentage of Total
Puerperal sepsis	20	37.04
Accidents of pregnancy	5	9.26
Other accidents of childbirth	11	20.37
Puerperal haemorrhage	9	16.67
Puerperal albuminuria and toxaemia	8	14.81
Other causes	1	1.85
	54	100.00

CHAPTER II.—INFECTIOUS AND COMMUNICABLE DISEASES.

(1) *Notification of Infectious Disease.*

In urban areas notification of infectious disease for all races is reasonably complete. In other areas especially in the non-fatal diseases even the notifications of European cases is often inaccurate. Efforts have been made to hasten the procedure of notification so that early action by the health authorities can be taken if the situation demands.

Disease	European Cases	European Deaths	Non-European Cases	Non-European Deaths
1. *Convention Diseases.*				
Cholera	—	—	—	—
Plague	—	—	—	—
Smallpox	4	2	1,819	426
Typhus fever (exanthematous)	—	—	—	—
Yellow fever	—	—	—	—
2. *Tuberculosis and Silicosis.*				
Pulmonary tuberculosis	42	16	370	76
Non-pulmonary tuberculosis	4	3	34	6
Silicosis	—	—	7	2
Silicosis with active tuberculosis	1	4	36	3
3. *Infectious diseases of childhood.*				
Chickenpox	248	—	440	—
German measles	43	—	1	—
Measles	49	1	53	—
Mumps	30	—	25	—
Whooping Cough	84	2	113	5
4. *Virus Encephalitis group.*				
Acute anterior poliomyelitis	14	2	3	—
Polio-encephalitis	1	1	4	—
Encephalitis	2	1	1	—
5. *Bacterial Infections.*				
Tetanus	1	—	2	1
Scarlet fever	42	—	4	—
Erysipelas	6	—	—	—
Puerperal septicaemia	—	—	3	2
Cerebro-spinal meningitis	2	2	41	9
Meningitis—other organisms	7	—	11	1
Diphtheria	66	1	420	45
Typhoid fever	36	4	175	17
Paratyphoid fever	1	—	4	—
6. *Miscellaneous.*				
Relapsing fever	1	—	—	—
Tick Typhus	1	—	—	—
Trachoma	—	—	44	—
Trypanosomiasis	—	—	9	5
Undulant fever	2	1	—	—
Amoebic dysentery	12	—	42	4

(2) *Malaria and Blackwater Fever.*

This is a historic year in the Colony's 58 years' history since the Occupation, in that not a single death from blackwater fever was registered. Only four cases of this condition were treated in Government hospitals. Malaria admissions number 1,187 and there were 17 deaths, a case mortality rate of 1.5 per cent., which is higher than usual. Deaths from malaria notified to the Registrar of Births and Deaths number 32, 6 of these being infants. Attention has been drawn in previous reports to the high proportion of infant deaths due to malaria, and the figures for 1948 are very high indeed. In the ten-year period 1939-48, 6.8 per cent. of the malaria deaths were of infants; the figure for 1948 is 18.7.

In the area of the south-western part of the Colony which usually has a small rainfall, malaria of epidemic proportions was experienced and farming operations were hindered even until August. In the same area a serious outbreak with high mortality occurred in Africans who had been moved recently from their overcrowded and overworked reserves at high altitudes. Arrangements have been made that no large-scale movement of population should be undertaken until careful consideration has been given to the state of balance of the population with malaria in their new homes. This will become more and more important when large-scale agricultural and irrigation development of the lower lying areas of the Colony is made.

Experience with paludrine during the year has been very conflicting. It is generally agreed that it is much slower in action in the treatment of falciparum malaria than quinine or mepacrine. Most practitioners control the fever with one of the older drugs and some switch to paludrine when the pyrexia is under control. In prophylaxis opinion is still very divided even when paludrine is taken in the bigger dose now recommended. Mepacrine and paludrine are sold to the public at all post offices as prophylactic drugs for malaria.

Work with the aim of controlling malaria at certain Government outstations was continued with promising results. A heavy application of residual D.D.T. to the interiors of all Native and European dwellings in and around the outstation has resulted in a great reduction in clinical malaria in both races, a complete absence of *A. gambiae* from dwellings and virtually a local disappearance of the larvae of this species from the breeding haunts. There seems little doubt that if much larger areas could be treated the improvement would be more permanent.

(3) *Schistosomiasis* (*Bilharzia*).

Trials with Miracil D have been continued during the year and it is now clear that with the type and extent of urinary infection encountered in this country the great majority of cases (90 per cent. in the trial groups who took adequate doses) can be cured with a dose of about 60 mg/kg of body weight spread over three to five days. The results with *S. mansoni* infections have not been so satisfactory, but there is now some evidence that by a great increase in the dose, cures *can* be obtained. The drug causes some gastro-intestinal irritation and a proportion of the patients complain of one or more of the following subjective symptoms: nausea, loss of appetite, dizziness, slight abdominal pain and constipation. A few cases may vomit. There would seem to be no contra-indications and no late effects have so far been observed.

Recent work would show that a satisfactory cure of urinary schistosomiasis can be achieved by giving the drug for three days only, one dose a day. More frequent doses seem to increase the subjective symptoms. What has still to be proved is whether it is feasible to undertake mass treatment of African populations in their villages with little supervision. The mass treatment of Africans in employment and under supervision is now practicable. It is hoped that when the drug can be made on a commercial basis the average price for treating a case will be far below eight shillings. In any case treatment with Miracil D will result in much saving of labour time. The cost of treatment in institutions using antimony was only a small proportion of the total cost of maintaining patients for a month.

Copper sulphate as a molluscide is distributed free to any landowner who is prepared to apply the chemical properly to waters in which the vector snails are harbouring.

The response has, however, been very disappointing, and only about five tons of copper sulphate was applied during the year. The three centres

where most work has been done are Salisbury Municipality 3,100 lbs,; Bindura 1,250 lbs. and Melsetter district 1,100 lbs., and the response from the rest of the Colony has been disappointing. It would appear to be necessary to undertake snail control in a more co-ordinated way in order to obtain good results.

During the year the apparatus for macroscopic diagnosis of eggs in urinary deposits was made available to Government clinics and favourable reports on the speed, ease and reliability of the method have been received.

A great deal of work has been done in the pathology of the disease and it has been shown that eggs may be deposited in any organ and tissue of the body often in considerable numbers. The local effect on organ function of such deposits of eggs is not clearly known, but it would seem that large egg deposits in such organs as the suprarenals must have some effect on function.

A propaganda film "Still Waters" is now complete with sound and has had a favourable reception from public audiences. The technical film "African Schistosomiases" is finished and will be ready for showing early in 1949. This edition will have a wide sphere of use in professional and technical training of doctors, nurses and health workers of the schistosomiasis areas of the world. A film strip with model lecture notes has been prepared for instruction in schools. Further information is given in Appendix Q.

(4) *Smallpox.*

This disease caused the most anxiety during the year and it is hoped that the present epidemic has now passed its peak. The progress of the disease since 1945 has shown 33 cases with no deaths in that year, 181 cases and one death in 1946, 685 cases and 117 deaths in 1947 and 1,823 cases and 428 deaths in 1948. The epidemic was of two distinct types variola major mainly confined to Matabeleland where there were 1,181 cases and 416 deaths. In the remainder of the Colony there were 642 cases and only 12 deaths, the case mortality rates per cent. being 35.2 and 2.5 respectively. A large number of the Matabeland cases were reported from one of the most inaccessible areas in the Colony, on the south bank of the Zambesi River north of Wankie. The municipal area of Bulawayo was also heavily involved and four European cases of the disease were the first reported in the Colony since 1939. Two of the cases died, the first European deaths reported since 1919.

Since 1900, 61 cases of smallpox have occurred in Europeans and 14 deaths reported, a case mortality rate of 23 per cent. The lesson seems to be that Europeans living in Southern Rhodesia rarely contract smallpox, no doubt due to the high vaccination protection maintained, but when cases do occur, usually in the few remaining unvaccinated, the case mortality rate is high.

The small staff of health inspectors were all heavily engaged in the vaccination of the native population. In Mashonaland there were many small outbreaks throughout the area with only a few cases occurring at each focus. This type of epidemic is if anything a more serious drain on transport resources, time and lymph supplies than the more virulent but localised outbreak.

In 1948, 1,002,861 vaccinations were performed and no untoward effects were reported.

(5) *Leprosy.*

Details of the cases treated at the two leprosy hospitals are given in Table A of the Appendix.

The European patients have made great progress since treatment with Diasone and later, Sulphetrone. Only two of the patients are still positive bacteriologically. The new treatment has completely altered the outlook of the patients who are in a much happier frame of mind. A few Africans have been treated with the sulphone drugs and the results have been so encouraging that the lepromatous cases will be transferred from Moogrol treatment as soon as possible.

The progress with the rebuilding programme at Ngomahuru is very slow and there is a desperate need for more accommodation. The position is made worse by the precarious water supply at the other settlement at Mtemwa.

(6) *Poliomyelitis.*

This disease continues to command undue interest from the general public, but the number of cases reported has given little cause for alarm. Including the virus encephalites together, the incidence of these diseases in recent years has been as follows:—

Year	European		African		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
1939	—	—	2	—	2	—
1940	9	1	—	—	9	1
1941	4	—	—	—	4	—
1942	3	—	2	—	5	—
1943	12	1	—	—	12	1
1944	17	4	15	3	32	7
1945	9	1	11	1	20	2
1946	33	1	22	2	55	3
1947	8	—	6	2	14	2
1948	17	6	8	—	25	6

(7) *Tuberculosis.*

The menacing role of this disease increases year by year and a number of cases occur in the villages, especially in women and childen. No special accommodation is yet in use for the highly infectious, rapidly advancing pulmonary infections, and so it is difficult to prevent family infections.

(8) *Enteric Fevers.*

An explosive outbreak of typhoid fever occurred near Selukwe affecting a large number of natives soon after a wedding feast. It is probable that a polluted water hole was responsible. A smaller outbreak occurred in the Bulawayo Municipal Area towards the end of 1948. It is surprising considering the amount of housing development proceeding around the larger towns that more water-borne outbreaks do not occur as the water supply is frequently from shallow and unprotected wells. Much of the new agricultural development has been in areas where the farmers, busy with opening up the land, have neglected to install reasonable domestic facilities. Despite this, water-borne and excremental diseases have not been a serious problem.

(9) *Diphtheria.*

A number of outbreaks of this disease have occurred in native villages with a fairly high mortality in young children. A combination of active and passive immunisation of the children in the neighbourhood has been effective in limiting the disease.

CHAPTER III. CURATIVE SERVICES.

(1) *European Hospitals.*

No increase in the number of hospitals has been possible, but a cottage hospital will open at Chipinga early in 1949.

The hospital admissions, rate per 1,000 of the population, the average number of days spent in hospital by each patient and the average number of patients per hospital bed are as follows:—

	1948	1943	1939
General hospital admissions	14,996	13,076	9,420
Admission rate per 1,000	142.8	160.5	155.1
Average days in hospital	10.0	11.4	11.6
Average number of patients per hospital bed	24.4	22.3	20.3

The pressure on existing hospital accommodation has been increasing since the war and with a great increase in the population brought about by immigration is worsening, and may soon reach a state when the present hospitals, even with serious overcrowding, will be unable to meet the demand without the existence of long waiting lists. In the Table above it will be seen that the pressure is now to be observed in all the factors measuring hospital use, the admission rate has been forced down, the average stay of a patient reduced to 10 days and the number of patients per hospital bed has risen 17 per cent. over the 1939 figure.

The pressure on hospital beds is further intensified because quite a large proportion of the population is now forced to live in cramped homes and even in rooms or on verandahs where the progress of even quite a minor illness is hindered by the condition of the patient's surroundings.

The position in respect of maternity home accommodation is just as critical as the following figures will show :—

	1948	1947	1946	1945
Percentage of births taking place in maternity homes	88.7	88.8	88.7	86.2
Total number of maternity beds	123	133	118	127
Average number of confinements per bed	20.7	17.9	16.3	13.8

Comparable data for the years 1939 and 1943 is not available, but it will be seen that if anything the position in regard to maternity bed accommodation is even more critical than in general hospitals.

In the case of both general hospital and maternity home accommodation the position in the five centres of most rapid growth is even more critical.

The statistical tables concerning European general hospitals appear in Tables D to H and the maternity home figures in Table J in the Appendix. In Table G is given the number of beds in each hospital. This is the number of beds for which the hospital was designed and includes beds in additional temporary accommodation in ex-R.A.F. hutments and other temporary structures. It does not include verandah beds and other additional beds.

(2) *District Nursing Service.*

At the end of 1948 ten District Nurses were operating, eight of whom were on the temporary staff.

A number of the temporary staff are wives of Civil Servants and liable to be transferred with their husbands. Although their service at outstations is gratefully appreciated, it must be admitted that their impermanence is a great disadvantage. No District Nurse is now stationed at Mrewa because of the lack of support. District Nurses were stationed at the following places :— Periurban Salisbury, Shamva, Gutu, Chipinga, Cashel, Melsetter, Macheke, Marandellas, Filabusi and Banket.

The work done by the staff in 1948 was as follows :—

Number of homes visited	839
Number of home visits paid	6,142
Visits of patients to nurse	813
Midwifery cases	44
Attendance—European clinics	1,274
Vaccinations	2,317
Other duties	2,428

(3) *Mental Disease.*

The increase in number of the patients in the Ingutsheni Mental Hospital continues at a steady rate and there were 899 patients in residence at the end of 1948, an increase of 91 during the year. During the period 186 patients, 72 European and 114 Africans, were discharged, all cured. There were 33 European and 14 African voluntary patients admitted and 42 of them were discharged during the year; 172 cases were placed on probation. Of these 67 have now been discharged and 11 readmitted for further care and treatment. There were 18 Europeans and 81 African deaths.

A third ward for male Africans was put into service during the year, but it has not yet been possible to have the old wards converted and redecorated for Coloured and Asiatic patients.

Occupational therapy amongst the male patients has been in full swing and many items of furniture and equipment for native clinics have been made. Little of this work has been possible among female patients because of lack of accommodation, and activities have been largely confined to darning and mending.

The 1948 season was a good one and the farming operations showed a profit of £1,171. Most of the produce goes to the patients themselves; 18,725 gallons of milk, 2,611 lbs. of butter, 89,600 lbs. of vegetables, 91,500 lbs. of lucerne and 500 bags of mealies were some of the items produced.

Electric convulsive therapy has been used extensively with uniformly good results. There is a rise in the number of chronic alcoholic European patients who are now admitted to this hospital because of the difficulties in securing their admission to special institutions in the Union of South Africa.

(4) *Native Hospitals.*

The condition of these institutions deteriorates from year to year and with the present building position there seems to be little hope of early relief. Some of the older hospitals are now quite unsuitable and as overcrowding is almost the rule, conditions for patients and the nursing staff ministering to them has become very difficult. Work is continuing on the new hospital sites at Salisbury and Bulawayo and 80-bedded maternity hospitals have been built and are nearing completion. These institutions will not, however, help to relieve the bed situation in the general hospitals because normal maternity cases are not generally accepted at the present time.

The following figures will give some measure of the overcrowding that exists :—

	1948	1943	1939
No. of beds for which hospitals were designed	1,258	922	770
Patients admitted	43,751	29,480	17,813
Average stay of patients in days	13.4	12.1	17.8
Daily average inpatient population	1,604	981	872

The detailed statistics relating to native hospitals appear in Tables D to H of the Appendix.

(5) *Native Clinics.*

The following figures will give some idea how the work done in these institutions has increased in the past ten years :—

	1948	1943	1939
Number of Clinics	79	63	47
Inpatients treated	95,811	43,548	29,247
Outpatients treated	237,805	146,666	69,728

It is very disappointing to have to report that only three further clinics were built and operating in 1948, although there is a crying need for these institutions all over the Colony. Twelve clinics are to be started in the coming year and there are 38 other clinics under consideration.

Details of the work done by these institutions are given in Table B of the Appendix.

(6) *Orthopaedic Centre.*

The Centre was established at Salisbury in 1947 and has now operated for two years. With a technical staff of three it has in this time dealt with 900 patients of all races, and supplied 64 calipers, 37 spinal supports, 30 belts, 24 trusses, 25 leg irons, 9 knee splints, 15 surgical boots, 282 foot supports, 60 boot adjustments and 14 wrist splints.

The Centre has been able to help in reducing the call on hospital beds by enabling patients to be discharged much earlier.

Artificial limbs are not yet being made, but much time and money has been saved in having in the Colony facilities for stump measurement, plaster casts and for the final fitting of limbs after manufacture at the Johannesburg limb factory.

Periodic visits are paid by the technician to other centres in the Colony where the service is much appreciated.

(7) *Missions.*

The new financial regulations governing grants-in-aid to medical missions is now in full operation and a great improvement in the standard of medical and nursing supervision has already occurred. Nine missions now have resident medical practitioners and eight others have an arrangement for a weekly visit by a medical practitioner. This represents half the total of 34 missions who receive grants, the remainder being under the supervision of trained nurses.

The Medical Council is empowered to exempt from registration medical missionaries who hold foreign qualifications which do not entitle them to admission to the register for full practice. The condition attached is that the doctors confine their work to the missions to which they are accredited without levying any direct fees on the patient.

A summary of the medical work done by missions is as follows:—

	1948	1943	1939
Number of aided medical missions	34	24	30
Total admissions	31,555	21,608	8,179
Outpatients treated	185,173	70,708	25,963

Fuller details are given in Table I of the Appendix.

(8) *Native Labour on Mines.*

Except for some of the larger mines, little progress has been possible in improving the housing and sanitary conditions, chiefly because of the shortage of building materials. Attention has therefore been devoted to trying to see that existing compounds are kept clean and repaired within the limits of local resources and labour. The existing depression has had the effect of closing down some mines and reducing the "life" of many others, which makes it difficult to insist on any major expenditure on improvement in such circumstances. Several new mines are now in course of development and the standard of housing, sanitation and amenities to be supplied is much better than some of the old-established mines.

Rationing of mine native labour was on the whole satisfactory, but the general shortage of meat and difficulties in the supply and distribution of substitutes caused some anxiety.

In the 1947 Report an attempt was made to show the amount of work done by the larger mining companies in supplying medical and hospital services for their employees. The information though incomplete was of interest. It has not, however, been possible this year to obtain the information needed.

(i) *Comparative Statement of African Mortality on Mines,* 1944-48.

	Twelve Months Ended November				
	1944	1945	1946	1947	1948
Average number employed at end of month	75,515	71,829	70,819	69,953	63,794
Diseases:					
Number of Deaths	551	564	525	497	435
Death rate per mille	7·30	7·85	7·41	7·10	6·68
Accidents:					
Number of Deaths	90	77	78	78	80
Death rate per mille	1·19	1·07	1·10	1·12	1·25
All Causes:					
Number of Deaths	641	641	603	575	515
Death rate per mille	8·49	8·92	8·51	8·22	8·07

(ii) *Death Rates from Disease.*

Death Rate per 1,000 Employed	Twelve Months Ended November				
	1944	1945	1946	1947	1948
Pneumonia	1·85	2·20	1·81	1·84	1·22
All Other Diseases	5·45	5·65	5·60	5·26	5·60
All Diseases	7·30	7·85	7·41	7·10	6·82

(iii) *Sickness, Deaths and Death Rates.*

Disease	Twelve Months Ended November, 1948		
	Number of Cases	Number of Deaths	Death Rate per Mille Employed per Annum
Malaria	5,216	18	0·28
Scurvy	133	—	—
Venereal Disease	2,553	28	0·44
Pneumonia	937	78	1·22
Phthisis	77	52	0·82
Other Diseases of Chest	650	19	0·30
Dysentery and Diarrhoea	1,366	9	0·14
Other Intestinal Diseases	488	59	0·93
Heart	68	55	0·86
Debility	273	9	0·14
Influenza	4,079	6	0·09
Other Diseases	2,015	102	1·60
Minor Ailments	18,804	—	—
TOTAL DISEASES	36,659	435	6·82
Accidents and Injuries:			
Major	773 (*a*)	80	1·25
Minor	12,635	—	—
TOTAL ALL CASES	50,067	515	8·07

(*a*) This figure is not strictly comparable with previous figures. Since January, 1948, the number of major accidents is taken from reports supplied by Mining Commissioners whereas previously this was obtained from information submitted by the mines.

(9) *Native Medical Services Generally.*

The demand by the African population for all types of medical service continues and it is now rare for an African, male or even female, to refuse treatment which has been recommended. They still do not appreciate the need of continuing treatment in those instances where improvement in the condition takes place early. In this failing, however, the African is not alone. Maternity services are embarrassingly popular and the African woman is generally no longer satisfied to have her confinement on the floor of a mud hut.

The following details of inpatient treatment given in various types of Government and State-aided institutions will give some idea of the expansion of medical services for the African. The number of institutions in each instance is given in brackets:—

	1948	1943	1939
Native Hospitals	43,751 (13)	29,480 (13)	17,813 (13)
V. D. Sections of Native Hospitals	4,183 (9)	4,605 (10)	2,740 (9)
Mental Hospitals	284 (1)	178 (1)	166 (1)
Leper Hospitals	262 (2)	226 (3)	195 (4)
Government Native Clinics	95,811 (79)	43,548 (63)	29,247 (47)
Medical Missions	31,555 (34)	21,608 (24)	8,179 (30)
TOTAL	175,846 (138)	99,645 (114)	58,340 (104)
Admission rate per 1,000 of African population	94·2	66·3	42·6

(10) *Extracts from District Reports.*

Until 1933 it was the custom to reproduce short extracts or summaries of the reports of Government Medical Officers. The custom will now be revived and the extracts will serve to illustrate some of the problems.

G.M.O., Bindura: Bilharzia is still one of our greatest problems. A number of natives are regular customers yearly and quite a few have come back for treatment within the year. Nothing is so sure and certain in this country as bilharzia re-infection, until such times as adequate preventive measures are taken.

G.M.O., Chipinga, remarks on the futility of installing mechanically operated pumping and water filtration equipment without trained staff to operate. He feels that simpler equipment, such as hand operated pumps, should be used as they are more in keeping with the mechanical and technical skill of the African operator.

G.M.O., Concession: This officer has been carrying out trials of penicillin in oil-wax in the treatment of early syphilis and this has proved very successful. Roughly 900 cases have now been treated with wholly satisfactory results. It is estimated that 32 days of hospital maintenance is saved for each patient and the productive work saved to the employer of labour is 28,000 man-days.

Ante-natal clinics have been started at three clinics in this district and are proving a great success. He states that child welfare work will also be started when some of the present burden of work can be shared. He believes that the time after cessation of breast-feeding is the most critical period in the life of the young African child.

G.M.O., Filabusi: As this is a mining area accident surgery looms large—256 operations being performed. A number of clean orthopaedic operations have been performed including excision of knee cartilage, patella. olecranon and head of radius and tendon transplanting. All these cases healed by first intention which illustrates what can be done under simple conditions without a fully equipped theatre or European nursing staff.

G.M.O., Gwanda reports a small outbreak of infectious mononucleosis in Europeans. No cases were discovered in Africans. He is impressed by the insidious and menacing hold that tuberculosis has in his district which has many small gold mines. In 16 consecutive post-mortems he found tuberculosis lesions in 8, active enough to be the main or a major contributory cause of death. He draws attention to the need for special care in nursing acute, fulminating cases of pulmonary tuberculosis so that hospital infections do not occur.

G.M.O., Karoi, draws attention to the future dangers being laid in store by the necessity of having to use water in surface dams for domestic purposes instead of underground borehole water. The district is not on the whole suitable for the exploitation of underground water. In view of the danger of bilharzia he suggests that surface dams should be considered only a temporary measure until more satisfactory borehole sites are found. He notes a very high proportion of tonsilitis in children of both races which he attributes to the high mica content of the dust.

G.M.O., Nyamandhlovu, draws attention to the risks involved in re-settling native populations in more malarious areas. The new immigrants suffer severely from the disease and the child mortality is thought to be very high. He discusses the need for giving them prophylactic drugs to tide them over until they have established a balance with the malaria parasite.

G.M.O., Plumtree, reports that this district which normally has a low rainfall and is usually free from malaria suffered severely during the wet season and the epidemic did not abate until August. During the peak of the epidemic 90 per cent. of the labour on some farms was incapacitated.

G.M.O., Que Que, draws attention to the acute overcrowding of both general and maternity beds in this rapidly expanding centre. This has caused serious difficulties in the sanitary arrangements. The original township was badly planned and it has been difficult to fit the centre of the town into a modern town plan. The township is built on soil which soon becomes waterlogged and it would seem necessary to undertake major subsoil drainage before much of the area can be built over.

A comprehensive helminthic survey was carried out on all African patients admitted. Of 1,728 patients, 652 had some helminth parasite, 539 of which had bilharzia or hookworm. There were 206 hookworm cases, 340 suffering from urinary bilharzia and 87 with intestinal bilharzia.

G.M.O., Rusapi, reports a great increase in native work. There were 118 admissions in December, 1947, and 272 in the same period in 1948. Overcrowding has been very acute. Three private practitioners now work at

this centre, but with the opening up of the district the burden on the G.M.O. is little relieved. He draws attenion to the need of good and reliable road communications to outside clinics if a regular supervision is to be maintained.

S.G.M.O., Salisbury: Both hospitals are working under heavy pressure and increased accommodation is urgently needed. The X-Ray Department took 35,394 films, 26,556 of Europeans, the remainder of Coloured, Asiatic and African patients. The Massage Department gave 10,234 treatments, almost entirely to inpatients.

CHAPTER IV.—PREVENTIVE HEALTH SERVICES.

(1) *Laboratories.*

The reports of the laboratories are reproduced in Appendices N, O, P and Q to the Report. The Hospital Laboratory, Umtali, is staffed by a female-trained laboratory technician under the periodic supervision of the Director of the Public Health Laboratory, Salisbury. Similar arrangements hold good at Gwelo under the direction of the Director of the Public Health Laboratory, Bulawayo.

The total numbers of examinations carried out by the routine laboratories are as follows:—

	1948	1943	1939
Public Health Laboratory, Salisbury	83,924	55,587	44,734
Hospital Laboratory, Umtali	13,463	—	—
Public Health Laboratory, Bulawayo	68,967	34,576	10,472
Hospital Laboratory, Gwelo	15,858	—	—
Government Analyst's Laboratory	2,823	1,161	1,148
Total	185,035	91,324	56,354

The Public Health Laboratory Reports have this year been set out so that the information given is comparable. Where positive reports have little relation to the number of patients examined the numbers are not given. Routine sputum examinations on cases of pulmonary tuberculosis and clearance tests on cases of diphtheria upset the value of giving details of positive findings.

Training of laboratory technicians has now been placed on a proper basis and it is hoped the staff position will be much improved eventually. The course of training will lead to admission to a register maintained by the Medical Council of Southern Rhodesia.

(2) *Schools' Medical Service.*

A summary of the findings at routine schools medical inspection of European, Coloured and Asiatic and African children is given in Tables K, L and M of the Appendix.

Schools which are scheduled for regular inspection are 99 European with an enrolment of 17,271, 15 Coloured and Asiatic with 2,491 and 9 African schools with 4,409 children. There are 2,019 Government-aided schools for Africans, most of which are conducted by missionary bodies, with en enrolment of 205,237. These schools have no regular medical inspection. During 1948 it was not possible to inspect children at all schools, but examinations and re-examinations were made at 84 European, 14 Coloured and Asiatic and 3 African schools.

The following is a summary of the findings in 1948 compared with five and ten years ago:—

	1948	1943	1939
European children examined (a)	10,049	2,125	5,309
Coloured and Asiatic children examined (a)	1,638	336	481
African children examined (a)	1,624	—	—
Unsatisfactory nutrition (per cent.)—			
European children	11.2	11.3	6.0
Coloured and Asiatic children	27.0	37.0	33.0
African children	26.7	—	—
European entrants found to be unvaccinated	222	—	377
Coloured and Asiatic entrants found to be unvaccinated	73	—	82

(a) Includes re-examinations and special examinations.

In 1948 there were 717 children on the register of mentally defective children, that is they had an intelligence quotient of 80 or less. Of this number 29 can be classed as ineducable having an I.Q. less than 50, 230 should be receiving their education in a special school as their I.Q. is between 50 and 70. The remaining 458 children are mentally retarded and should be receiving education in special classes. The pressure on accommodation in special schools in the Union of South Africa is such that children from this Colony have difficulty in securing admission and the provision for these unfortunate children within Southern Rhodesia becomes more necessary than ever.

There has been a steady increase in the number of children with head lice infestation. The new appointments of school nurses should mean an immediate improvement in this condition.

An interesting difference in the tonsil position of the three racial groups is noted. Thirty-six per cent. of European and 6 per cent. of Coloured and Asiatic children examined had had their tonsils removed. In the African children no tonsils had been removed or appeared to require removal.

Schools Medical Officers are now based two each at Salisbury and Bulawayo and much saving in travelling time and transport has resulted.

Dr. Ann Clark retired in 1948 after 20 years' service during which time she did much work in connection with the testing of retarded and deficient children.

(3) *Government Dental Service.*

The staff of five dental surgeons is now in full operation and an increase in the work done has resulted. Africans are asking for more dental attention than ever before, especially in the larger urban centres, and the dental surgeons at Salisbury and Bulawayo conduct regular clinics at the native hospitals. Provision has been made in the new hospitals now in course of construction for accommodation for these clinics.

(a) *Schools.*

	Mashonaland and Manicaland	Midlands	Matabeleland
Children examined	8,906	2,786	6,070
Children treated	1,093	617	371
Fillings—			
Temporary teeth	492	602	230
Permanent teeth	1,211	803	200
Extractions—			
Temporary teeth	1,044	508	342
Permanent teeth	215	90	55
Other operations	15	2	13
Scalings	20	2	2

(b) *B.S.A.P. Permanent Staff Corps and Prison Services.*

Extractions	115	17	78
Fillings	462	141	102
Dentures supplied	57	7	6
Dentures repaired	30	—	8
Other operations	265	—	52

(c) *Indigent Europeans and Africans.*

Extractions	2,831	14	2,124
Fillings	101	—	62
Dentures supplied	91	2	13
Dentures repaired	22	—	9
Other operations	161	—	12

(4) *Health of the B.S.A. Police.*

Despite the increase in the size of the Force the sickness reported is very satisfactory. The Force now numbers 725 Europeans and 1,653 Africans. The European members now have an unbroken seven years of freedom from venereal disease. In the following table light duty is counted as half a day's duty lost :—

	Europeans	Africans
Number sick	746	1,463
Days lost	10,787	11,345
Average days lost per case	14.4	7.8
Cases of venereal disease	—	64
Discharged medically unfit	9	9
Deaths	2	3

(5) *Central Government Health Services.*

Matabeleland with a Regional M.O.H. and three health inspectors operates as a Health Region. A M.O.H. and two health inspectors confine their attentions to the peri-urban areas of Salisbury which it is hoped will soon be administered by three urban-district councils on a new type of central and local government co-operation.

The remainder of the Colony is served by detached health inspectors who are technically directed from headquarters. Many of the inspectors have to cover immense areas and it is difficult not to spend too much time travelling to remote places instead of concentrating on the multitude of health problems awaiting solution in the more heavily populated areas. New legislation designed to improve conditions in food premises, hotels, factories, mines, slaughter houses and the like place a heavy additional labour on a very small and scattered staff liable at any time to be deeply involved with major epidemic diseases.

The following is a summary of the work done; there were no health inspectors employed in 1939 :—

	1948	1943
Vaccinations	1,002,861	230,532
Diphtheria prophylaxis	41,184	—
Inspections of licensed hotels	196	—
Routine inspection of premises	16,284	2,960
Other duties	539	4,027
Prosecutions instituted	78	—
Number of inspectors employed	16	4

It is a tribute to the tact and perseverance of the inspectors that in only 78 instances was it necessary to seek recourse to the law.

(6) *Local Government Health Services.*

Municipalities and town management boards, by virtue of the Public Health Act, are local authorities in health matters within their areas. There are six municipalities, two of whom employ full-time specialist officers, the remainder employing part-time general practitioners. Two of the municipalities do not employ any health inspector staff and depend on Government Health Inspectors for the performance of inspection work in their areas. All town management boards employ the resident Government Medical Officer as their Medical Officer of Health in accordance with the provisions of section 9 of the Public Health Act. Only one town management board—Fort Victoria—employs its own health inspector. In rapidly expanding urban areas it is most unsatisfactory that the health authority does not employ at least one fully qualified health inspector to control the many problems of environmental health and sanitation which arise when great expansion, temporary housing and increased industrial activity are in operation. The obligations and duties concerned with the health of a community should be borne only by local health authorities who are prepared to employ trained staff.

During 1948 the following increases in local authority health staff were made :—

City of Bulawayo : One Assistant Medical Officer of Health.

Umtali : One Health Inspector.

The two larger local health authorities, Salisbury and Bulawayo, provide a comprehensive health service on a par with that supplied by urban authorities in Great Britain. The central government makes substantial contributions to this work and also assists in meeting the capital cost of hospitals and buildings required to carry out the services.

The following précis gives an indication of the scope of the work and duties performed by the two larger local authorities during the year 1948:

	Salisbury	Bulawayo
Estimated European population	23,000	20,000
Estimated Coloured and Asiatic population	2,069	1,980
Estimated African population	56,660	33,867
Admissions, European Infectious Diseases Hospital	157	194
Admissions, Native Infectious Diseases Hospital	1,335	463
Admissions, Native V.D. Hospital	1,972	2,937
Attendances, Native V.D. Clinics	29,967	90,737
New cases of syphilis in Africans	1,693	1,790
New cases of gonorrhoea in Africans	2,200	4,572
Medical examination of Africans in employment	113,043	47,373
Laboratory investigations	(a)	6,530
Cases seen at ante-natal clinics (all races)	3,854	3,244
Infant and child welfare clinic attendances (all races)	21,997	12,573
Diphtheria immunisation	(a)	632
Vaccination	5,240	50,219
Visits paid by health visitors	11,057	5,330
Inspections by health inspectors	(a)	17,066
Total admissions of Africans to local authority hospitals	3,933	3,400

(a) Figures not available.

(7) *Nutrition Services.*

It has not yet been possible to recruit the technical staff necessary before a full-scale nutrition survey can be attempted. The Council has therefore restricted its activities to investigation of the existing food supplies and the developments under way to increase the food productivity especially in native reserves.

A start has been made in education in nutrition and three pamphlets have been drafted and one film is being planned. The school boarding hostels are a great asset in that they arouse in early youth a taste for well-cooked nutritious foods, properly served. The mass of African school children are day scholars so that this approach is not possible. Little has been possible in the supply of extra nourishment to African school children at a mid-morning meal and in fact such a scheme is now operating at only two schools.

(8) *Aviation Health.*

A sanitary aerodrome has been established at the Victoria Falls for seaplanes only. The Colony now has sanitary aerodromes at Belvedere at Salisbury, Kumalo at Bulawayo and at Victoria Falls. Difficulties occurred when certain countries did not recognise yellow fever inoculation certificates issued here. These have now been surmounted.

The question as to which doctors shall be permitted to sign international vaccination certificates is the cause of much confusion. Some countries permit doctors other than those holding an official Government appointment to sign certificates and the task of the examining officers at aerodromes is becoming very difficult. All International Certificates of vaccination against smallpox issued to persons in Southern Rhodesia are signed by doctors in Government Service.

One hundred and thirty-three medical examinations for the "B" pilot licence were done by Government Medical Officers at Salisbury and Bulawayo,

CHAPTER V.—ADMINISTRATION AND MISCELLANEOUS.

(1) Administration.

On 1st April, 1948, as a part of a general reorganisation of the Government Service, the Public Health Department administered within the Division of Internal Affairs became a Ministerial Division of Health. At the same time a Ministerial Portfolio of Health was created.

(2) Staff (Establishment).

1.	Medical Officers—	
	At Headquarters (Secretary for Health, 1; Directors of Curative and Preventive Services, 2; Nutrition Officer, 1, Schools Medical Officers, 2)	6
	In Districts (Senior Government Medical Officers, 6; Government Medical Officers, 44; Aided Government Medical Officers, 6; Regional Medical Officer of Health, 1, Schools Medical Officers, 2)	59
	Specialists (Directors of Laboratories, 2; Pathologist, 1; Superintendents, Mental and Leprosy Institutions, 3; Radiologists, 3; Psychiatrist, 1)	10
	Resident Medical Officers	11
	Total	86
2.	Dental Surgeons	5
3.	Analytical Chemists	4
4.	Pharmaceutical Chemists:	
	At Headquarters	2
	Medical Store	5
	At Hospitals (Hospital Secretaries, 11; Dispensers, 3)	14
	Total	21
5.	Health Inspectors	18
6.	Laboratory Professional and Technical Assistants	18
7.	Research Staff (Professional assistants, 2; Technical assistants, 3; Medical Entomologist, 1)	6
8.	Nursing Staff (Staff Matron, 1; Senior Matrons, 2; Matrons, 25; Sister Tutors, 5; Sisters, 56; Qualified General Nurses, 214; District Nurses, 20; Student Nurses, 176; Male Mental Nurses: Head Attendants, 2; Charge Nurses, 4; Qualified Nurses, 20; Female Mental Nurses: Senior Matron, 1; Matrons, 2; Sisters, 3; Female Mental Nurses, 18)	579
9.	Preventive Staff (Anti-malaria Officer, 1; Sanitary Airport Control Officers, 2)	3
10.	Orthopaedic Technician	1
11.	Radiographers (including learners)	18
12.	Masseuses	7
13.	Dietitians	4
14.	Other European Staff	172
15.	Non-European Staff	1,633
	Total	2,575

A number of posts on establishment are temporarily vacant, but the general staff shortage has now been righted except in the categories of nursing and clerical staff.

(3) Nursing Service.

The availability of nurses and probationers for training has much improved and there is little doubt that but for the pressure on living accommodation the establishment could be filled with ease.

In 1947 the difference between establishment and employed was 114 and is now 87.

The number of nurses on the permanent staff has also shown an improvement of 27 on last year and they now number 213. The change-over in staff is, however, still very great; 89 joined the staff and 62 left for various reasons. As always, marriage is the chief factor in nursing staff resignations and 45 resigned for this reason. Three senior members retired during the year—Miss L. Deacon, Staff Matron, after 29 years' service; Miss E. Lee-Webster, for many years Matron of the Native Hospital, Salisbury, after 18

years' service; and Miss L. Freeborn, Sister Tutor, Salisbury. after 14 years' service. Miss Freeborn was honoured in the New Year Honours' List, 1949, being admitted a Member of the Order of the British Empire.

The student nurse situation is far from satisfactory and of those recruited 25 failed to complete their training.

Thirty-three student nurses passed their final examinations in 1948, but not a single one has joined the permanent staff. A number who have proceeded to the Union and overseas to undertake further study may join the staff at a later date.

(4) Medical Council of Southern Rhodesia.

The numbers on the Registers of the Council at the end of 1948 are as follows, not all necessarily residing and practising in Southern Rhodesia:—

	Additions	Total at 31.12.48
Medical Practitioners	57	333
Temporary Registrations (Medical Practitioners)	13	13
Dental Surgeons	7	56
Chemists and Druggists	27	143
Opticians	4	10
Trained Nurses—		
General	72	638
Mental	7	28
Sick Children's	2	6
Fever	3	3
Orthopaedic	2	2
Midwives	74	298
Masseurs and Masseuses	2	18
Radiographers	—	5
Sanitary (Health) Inspectors	7	41
Meat and other Food Inspectors	6	36
Health Visitors	2	2
School Nurses	1	1
Holder of Mothercraft Certificate	1	1
Native Nursing Orderlies	18	115
Native Health Demonstrators	11	20

It is estimated that there are now 207 medical practitioners actively practising in Southern Rhodesia, which is almost double the number practising in 1939.

The regulations governing registration of medical practitioners were revised to ensure that applicants had undertaken three years' study at a University or medical school granting a qualification registerable in Southern Rhodesia.

(5) Training.

(i) *Nursing Training (General Nursing).*

The following are the results of the examination held by the Medical Council of Southern Rhodesia during the calendar year 1948:—

	Number of Candidates	Number Passed	Number Failed
Preliminary examinations	51	36	15
Preliminary examinations (Part I only)	20	17	3
Final examinations	37	33	4

The examinations were held in April and May and in November. Six nurses passed the final examination with honours, two of whom were presented with the gold medals provided by the local branches of the British Medical Association.

(ii) *Native Male Nursing Orderlies.*

These are trained on a three-year course at Salisbury and Bulawayo Hospitals and at the Swedish Mission Hospital at Mnene, which has now been recognised by the Council as a training school. Some of the students from this training school sat for the lower examination this year.

	Number of Candidates	Number Passed	Number passed Nursing and Hygiene	Number Failed
Lower Examination	50	20	17	13
Higher Examination	19	18	—	1

(iii) *Native Health Demonstrators.*

Eleven students sat the examination in December, 1948, and all were admitted to the Register.

For economic reasons it has been difficult to attract sufficient students for this training from the ranks of those who have had two years' artisan training at Government Industrial Schools. The Council has accepted the principle of a three-year course of training and this will start in 1949.

(6) Military Pensions.

Medical boards on pensioners are conducted by medical officers in the Government Service with the assistance of the Honorary Consultants. The pressure of work on Pension Medical Boards has eased as a number of pension awards are made permanent. New claims for pensions have greatly diminished from 93 in 1947 to 15 in 1948. The number of Imperial pensioners examined has more than doubled the 1947 figure and is an indication of the flow of immigrants into the country. Medical boards conducted in 1948 were as follows:—

Southern Rhodesia Pensioners—	
Europeans	850
Coloured	18
African	30
New claims to pension—Southern Rhodesia	15
Pensioners examined for Northern Rhodesia	2
Pensioners for Imperial Government	110
Pensioners for Union of South Africa	75
Pensioners for elsewhere in the Empire	6
Total	1,106

(7) St. John Ambulance and Red Cross Associations.

Both organisations report steady progress in their work, especially among Africans, who are extremely appreciative of the instruction in first-aid given. The Medical Comforts Depots have fulfilled a great need and it has been necessary to increase stocks to deal with the rising demand for home nursing equipment and surgical appliances for temporary use. Blood transfusion services for Europeans are maintained at Salisbury and Bulawayo; African services at these centres and also at Umtali.

Training has expanded considerably; a most encouraging feature has been the formation of African divisions in several large industrial concerns. New classes have also been started in some of the smaller towns.

St. John Ambulance Association gained a total of 647 certificates, including first-aid and home nursing, and the members performed 18,100 hours of hospital duty. Members attended public gatherings and sporting events and dealt with more than 7,500 cases. The Brigade operate five ambulances and during 1948 transported 8,151 patients. Members of both organisations attended the Cadet and Territorial Training Camp at Hunyani. Consideration is being given to a proposal to establish a Territorial Nursing Unit which would give a proper status to those members of the organisation who were interested in this type of service.

(8) Habit-Forming Drugs.

One hundred and two import and thirty-nine export permits were issued in 1948.

Drug.	Imports grammes.	Exports grammes.
Medicinal opium	1,050	20
Opium (in tinctures, extracts and other preparations)	18,598	1,407
Indian hemp (in form of galenicals)	—	—
Morphine alkaloid	6,130	57
Diacetyl morphine (heroin) alkaloid	141	83
Cocaine alkaloid	4,793	32
Methyl morphine (codeine) alkaloid	5,459	247
Ethyl morphine (dionine) alkaloid	27	—
Pethidine (as base)	3,358	171

Amidone and metapon were added to the list of dangerous drugs.

During the year the majority of the pharmacies in the Colony were inspected. Although there were no flagrant breaches of the law, there came to light instances where the custody of dangerous drugs and the recording of issues was not being properly carried out. It is hoped that a general improvement will be seen at the next inspection.

A complete revision of dangerous drugs legislation is now being considered and a new Bill is being drafted.

LEPROSY, 1948.

TABLE A.

Institution	Race of Patients	Number on Registers 1.1.48	Admissions	Readmitted for Treatment	Readmitted for Economic Reasons	Discharged	Died	Deserted	Number on Registers 31.12.48	Total Treated	Babies Born
Ngomahura	European	6	—	—	—	2	—	—	4	6	—
	Coloured	—	—	1	—	—	—	—	1	1	—
	Native	751	169	65	2	76	32	63	816	987	19
Mtemwa	Native	601	93	40	—	46	28	49	623	734	16
Mneno	Native	11	—	—	—	10 (*a*)	1	—	—	11	—
TOTAL		1,369	262	106	2	134	61	112	1,444	1,739	35

(*a*) Transferred to Ngomahuru Hospital during the year.

Clinic	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Treatments		
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total
Antelope	—	94	94	—	614	614	—	—	—	305	7,455	7,760	1,456	23,090	24,546
Arrowan	142	658	800	3,678	13,028	16,715	4	23	27	155	916	1,071	532	3,734	4,266
Banket	293	1,371	1,664	11,418	14,270	25,688	1	24	25	261	2,374	2,635	1,626	14,209	15,835
Belingwe	278	895	1,173	7,158	17,779	24,937	4	19	23	250	876	1,126	2,000	5,256	7,256
Birchenough	13	808	821	693	10,005	10,698	—	12	12	1	4,933	4,934	24	17,938	17,962
Buhera	80	385	465	3,444	10,824	14,268	—	5	5	165	1,339	1,504	971	7,090	8,061
Chibi	577	2,687	3,264	17,603	32,439	50,042	1	14	15	—	4,489	4,489	—	23,475	23.475
Chiduku	58	401	459	816	5,032	5,848	—	5	5	93	5,947	6,040	375	10,617	10,992
Chilimanzi	100	811	911	5,222	18,039	23,261	2	19	21	53	1,568	1,621	901	13,519	14,420
Chinomwe	166	1,127	1,293	5,947	11,913	17,860	1	7	8	61	1,649	1,710	372	5,378	5,750
Chinyika	372	1,662	2,034	7,894	9,532	17,426	—	27	27	575	2,043	2,618	2,300	2,902	5,202
Chipinga	98	1,220	1,318	3,665	19,102	22,767	1	32	33	156	1,679	1,835	789	13,934	14,723
Cencession	1,199	1,070	2,269	20,744	19,974	40,718	8	80	88	60	1,248	1,308	600	7,674	8,274
Dagamella	4	43	47	19	505	524	—	1	1	57	740	797	288	12,089	12,377
Darwendale	304	484	788	5,831	4,835	10,666	—	16	16	22	1,643	1,665	76	6,067	6,143
Essexvale	257	741	998	10,242	13,647	23,889	6	18	24	233	1,929	2,162	2,796	23,148	25,944
Filabusi	283	2,128	2,411	10,442	30,839	41,281	2	59	61	449	2,548	2,997	1,347	5,096	6,443
Fort Usher	531	47	578	23,260	598	23.858	1	—	1	254	1,997	2,251	1,313	3,154	4,467
Gokwe	87	297	384	3,221	7,584	10,805	2	10	12	47	620	667	596	8,100	8.696
Gutu	57	1,300	1,357	5,260	20,889	26,149	5	8	13	17	6,130	6,147	17	16,238	16,255
Hartley	402	1,796	2,198	13,598	25,419	39,017	3	52	55	264	5,995	6,259	603	16,797	17,400
Highfield	—	910	910	—	5,339	5,539	—	21	21	324	9,908	10,232	2,855	42,570	45,425
Inyanga	267	1,206	1,473	3,266	15,716	18,982	—	7	7	301	4,635	4,936	2,317	22,458	24,775
Inyati	185	834	1,019	9,760	11,618	21,378	—	27	27	111	705	816	1,097	10,977	12,074
Jena	53	275	328	2,438	7,250	9,688	1	6	7	195	2,701	2,896	—	—	18,971
Karoi	—	4	4	—	19	19	—	1	1	105	2,461	2,566	362	3,855	4,217
Kezi	56	444	500	1,106	3,636	4,742	1	5	6	87	1,849	1,936	516	8,746	9,262
Kutama	149	1,185	1,334	1,341	8,475	9,816	—	8	8	99	15,580	15,679	802	16,425	17,227
Kwenda	116	376	492	3,607	9,994	13,601	1	9	10	302	5,685	5,987	1,572	29,382	31,954
Lady Maring Baring	61	108	169	1,215	2,610	3,825	—	1	1	127	792	919	2,957	16,612	19,569
Loreto	54	515	569	368	6,886	7,254	6	13	19	133	6,276	6,409	1,330	17,557	18,887
Lukosi	182	269	451	7,732	7,755	15,487	1	13	14	43	583	626	368	4,664	5,032
Lupani	25	715	740	300	5,398	5,698	—	9	9	171	796	967	335	4,554	4,889
Luveve	4	472	476	90	9,087	9,177	—	2	2	289	9,112	9,401	816	29,991	30,807

Mabadzenge	—	—	—	—	—	—	—	—	—	—	5,615	5,615	—	9,778	9,778
Makumbi	24	1,747	1,771	540	16,585	17,125	3	24	27	45	10,901	10,946	270	20,204	20,474
Marandellas	542	1,917	2,459	21,197	27,423	48,620	3	77	80	143	3,007	3,150	400	12,373	12,773
Maranke	59	412	471	874	3,447	4,321	—	5	5	211	1,674	1,885	1,020	6,777	7,797
Matibi	668	1,051	1,719	13,058	18,519	31,577	1	4	5	72	583	655	456	1,883	2,339
Matobo	18	210	228	364	2,458	2,822	—	1	1	33	1,227	1,260	134	3,683	3,817
Melsetter	25	217	242	574	3,531	4,105	—	7	7	82	1,184	1,266	818	8,604	9,422
Miami	126	932	1,058	4,150	14,763	18,913	—	31	31	142	1,617	1,759	1,704	6,851	8,555
Mondoro	198	1,119	1,317	2,804	12,169	14,973	—	4	4	148	5,791	5,939	871	28,956	29,827
Mphoengs	59	153	212	772	2,279	3,051	—	2	2	44	157	201	1,261	4,185	5,446
Mount Darwin ..	176	715	891	2,747	9,579	12,326	—	1	1	641	4,184	4,825	3,870	14,237	18,107
Mrewa	202	1,925	2,127	7,271	20,474	27,745	2	16	18	—	6,369	6,369	—	11,723	11,723
Mtoko	220	3,565	3,785	7,628	37,822	45,450	—	56	56	183	4,950	5,133	309	12,603	12,912
Nedewedzo	5	5	10	102	108	210	—	—	—	16	400	416	96	1,352	1,448
Nkai	293	646	939	14,536	27,615	42,151	—	19	19	475	1,106	1,581	2,490	13,753	16,243
Norton	334	901	1,235	10,738	11,760	22,498	1	20	21	41	2,387	2,428	229	12,158	12,387
Nyamandhlovu ..	230	691	921	6,942	10,699	17,641	4	34	38	82	768	850	690	4,916	5,606
Nyamazuwi	47	1,665	1,712	1,617	18,073	19,690	—	3	3	49	2,518	2,567	121	7,298	7,419
Nyanyadzi	155	880	1,035	3,417	12,245	15,662	2	11	13	145	3,653	3,798	851	25,673	26,524
Odzi	495	686	1,181	5,481	4,221	9,702	1	5	6	105	1,702	1,807	628	6,502	7,130
Plumtree	272	1,076	1,348	4,965	11,886	16,851	3	37	40	462	874	1,336	1,353	10,104	11,457
Range	265	647	912	13,194	19,435	32,629	—	—	—	227	1,072	1,299	1,001	4,386	5,387
Rosa	59	778	837	1,341	10,764	12,105	1	9	10	140	6,674	6,814	673	13,069	13,774
Selukwe	362	925	1,287	16,362	12,960	29,322	—	48	48	805	5,278	6,083	1,773	10,860	12,633
Shabani	—	—	—	—	—	—	—	—	—	—	—	—	1,078	4,515	5,593
Shiota	316	1,031	1,347	17,885	18,754	36,639	2	20	22	112	5,849	5,961	763	23,103	23,866
Sipepa	235	397	632	13,675	10,649	24,324	1	15	16	102	2,043	2,145	721	4,443	5,164
Sipolilo	27	968	995	502	13,443	13,945	1	12	13	43	2,920	2,963	130	14,216	14,346
Stanley	46	143	189	1,030	3,452	4,482	—	6	6	188	1,390	1,578	2,009	3,955	5,964
Tjolotjo	190	1,051	1,241	3,523	11,700	15,223	—	20	20	235	3,053	3,308	840	16,331	17,171
Tsonzo	20	455	470	302	4,971	5,273	—	5	5	381	4,479	4,860	1,370	7,666	9,036
Umvuma	196	1,296	1,492	9,972	24,928	34,900	1	24	25	28	3,450	3,478	162	12,120	12,282
Urungwe	51	201	252	960	2,982	3,942	—	3	3	169	4,023	4,192	762	10,621	11,383
Victoria Falls	—	—	—	—	—	—	—	—	—	—	2,743	2,743	—	13,908	13,908
Wedza	222	895	1,117	9,605	18,908	28,513	—	4	4	180	3,449	3,629	1,440	24,143	25,583
TOTAL (69)	12,590	56,638	69,228	389,515	799,452	1,188,967	77	1,076	1,153	11,514	226,291	237,805	64,604	834,145	917,720

GOVERNMENT NATIVE CLINICS.

TABLE B (*Cont.*)

Clinic	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Treatments		
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total
Ndanga	3,020	2,594	5,614	71,525	51,990	123,515	35	69	104	—	—	—	—	—	2,492
Bikita	469	3,182	3,651	11,999	80,170	92,169	1	55	56	—	—	—	—	—	4,763
Chichidza	201	1,719	1,920	6,846	47,833	54,679	2	30	32	—	—	—	—	—	4,593
Chiduma	50	505	555	1,759	32,812	34,571	1	5	6	—	—	—	—	—	1,159
Chikuku	215	1,228	1,443	12,521	43,208	55,729	12	13	25	—	—	—	—	—	2,680
Chingombe	355	4,788	5,143	10,601	106,351	116,952	2	36	38	—	—	—	—	—	11,459
Chitando	410	3,549	3,959	10,450	79,326	89,776	8	42	50	—	—	—	—	—	2,729
Matsai	110	1,938	2,048	3,777	61,960	65,737	—	22	22	—	—	—	—	—	2,341
Sangwe	58	671	729	2,117	24,245	26,362	2	8	10	—	—	—	—	—	584
Siyawarewa	295	1,226	1,521	9,076	38,287	47,363	4	19	23	—	—	—	—	—	1,654
TOTAL NDANGA GROUP (10)	5,183	21,400	26,583	140,671	566,182	706,853	67	299	366	—	—	—	—	—	34,454
GRAND TOTAL (79)	17,773	78,038	95,811	530,186	1,365,634	1,895,820	144	1,375	1,519	—	—	—	—	—	952,174

TABLE C.

CLASSIFICATION OF EUROPEAN DEATHS, 1948.

Deaths Classified according to the International List of Causes of Sickness and Death: Fifth Decennial REVISION.

International List No.	Cause of Death.	No. of Deaths.
	I.—*Infective and Parasitic Diseases.*	
1	Typhoid fever	4
5	Undulant fever	1
6	Cerebro-spinal (meningococcal) meningitis	2
9	Whooping cough	2
10	Diphtheria	1
13	Tuberculosis of the respiratory system—	
	(a) With mention of occupation disease of lung	4
	(b) Without mention of occupational disease of lung	16
14	Tuberculosis of the meninges and central nervous system	3
24	Purulent infection and septicaemia	4
27	Dysentery	5
28	Malaria	32
30	Syphilis—	
	(a) Aneurysm of the aorta	6
33	Influenza	4
34	Smallpox	2
35	Measles	1
36	Acute poliomyelitis and polioencephalitis	3
37	Acute infectious encephalitis (lethargic or epidemic)	1
42	Other diseases due to helminths	1
	II. *Cancer and Other Tumours.*	
45	Cancer of the buccal cavity and pharynx	3
46	Cancer of the digestive organs and peritoneum	48
47	Cancer of the respiratory system	15
48	Cancer of the uterus	3
49	Cancer of other female genital organs	2
50	Cancer of the breast	7
51	Cancer of the male genital organs	9
52	Cancer of the urinary organs	3
53	Cancer of the skin (scrotum excepted)	3
55	Cancer of other or unspecified organs	4
56	Non-malignant tumours	4
57	Tumours of undetermined nature	3
	III.—*Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Vitamin Deficiency Diseases.*	
58	Rheumatic fever	4
59	Chronic rheumatism and other rheumatic diseases	2
61	Diabetes mellitus	24
63	Diseases of the thyroid and parathyroid glands	3
66	Other general diseases	2
69	Pellagra	2
	IV.—*Diseases of the Blood and Blood-forming Organs.*	
72	Haemorrhagic conditions	2
73	Anaemias	4
74	Leukaemias and Aleukaemias	3
76	Other diseases of the blood and blood-forming organs	2
	V.—*Chronic Poisoning and Intoxication.*	
77	Alcoholism (ethylism)	1

International List No.	Cause of Death.	No. of Deaths.
	VI.—*Diseases of the Nervous System and Sense Organs.*	
80	Encephalitis (non-epidemic)	4
81	Meningitis (non-meningococcal)	4
82	Diseases of the medulla and spinal cord	3
83	Intra-cranial lesions of vascular origin	49
84	Mental disorders and deficiency—	
	(a) Mental deficiency	2
	(b) Other mental disorders included under 84	8
85	Epilepsy	2
86	Convulsions in children under 5 years of age	1
87	Other diseases of the nervous system	2
	VII.—*Diseases of the Circulatory System.*	
90	Pericarditis	3
91	Acute endocarditis	2
92	Chronic affections of the valves and endocardium	16
93	Diseases of the myocardium	51
94	Diseases of the coronary arteries, angina pectoris	83
	Other diseases of the heart	10
97	Arteriosclerosis (excluding coronary or renal sclerosis or cerebral haemorrhage)	12
99	Other diseases of the arteries	2
100	Diseases of the veins	1
102	High-blood pressure (idiopathic)	14
	VIII.—*Diseases of the Respiratory System.*	
106	Bronchitis	4
107	Broncho-pneumonia	12
108	Lobar pneumonia	15
109	Pneumonia	4
111	Congestion, oedema, haemorrhagic infarction and thrombosis of the lungs	3
112	Asthma	6
114	Other diseases of the respiratory system—	
	(a) Silicosis and other occupational pneumoconioses	2
	(d) Abscess of lung	1
	(e) Other diseases included under 114 not specified as occupational	2
	IX.—*Diseases of the Digestive System.*	
116	Diseases of the oesophagus	2
117	Ulcer of the stomach or duodenum	8
118	Other diseases of the stomach	5
119 & 120	Enteritis and diarrhoea	8
121	Appendicitis	4
122	Hernia, intestinal obstruction	10
123	Other diseases of the intestines	3
124	Cirrhosis of the liver	8
125	Other diseases of the liver	3
126	Biliary calculi	2
129	Peritonitis without stated cause	1
	X.—*Diseases of the Urinary and Genital Systems (not Venereal or connected with Pregnancy or the Puerperium).*	
131	Chronic nephritis	13
132	Nephritis (not stated to be acute or chronic) (over 10 years of age)	7
133	Other diseases of the kidney and ureters	3
134	Calculi of the urinary passages	1
137	Diseases of the prostate	5
139	Diseases of the female genital organs	2

International List No.	Cause of Death.	No. of Deaths.
	XI.—*Diseases of Pregnancy, Childbirth and the Puerperal State.*	
146	Haemorrhage of childbirth and the puerperium	1
147	Infection during childbirth and the puerperium	1
148	Puerperal toxaemia	1
149	Other accidents of childbirth	1
	XII.—*Diseases of the Skin and Cellular Tissue.*	
153	Other diseases of the skin and cellular tissue	1
	XIV.—*Congenital Malformations.*	
157	Congenital malformations	7
	XV.—*Diseases Peculiar to the First Year of Life.*	
158	Congenital debility	2
159	Premature birth	29
160	Injury at birth	5
161	Other diseases peculiar to the first year of life	12
	XVI.—*Senility, Old Age.*	
162	Senility, old age	11
	XVII.—*Deaths from Violence.*	
163	Suicide by poisoning—	
	(a) Suicide by solid or liquid toxic or corrosive substances	2
164	Other forms of suicide—	
	(a) Suicide by hanging or strangulation	1
	(c) Suicide by firearms and explosives	8
	(f) Suicide by crushing	1
	(g) Suicide by other or unspecified means	1
168	Homicide by other or unspecified means	1
169	Railway accidents (any cause of death except war)	4
170	Motor vehicle accidents (any cause of death except war)	26
173	Air transport accidents (any cause of death except war)	9
175	Agricultural and forestry accidents (any cause of death except war)	1
179	Other acute accidental poisoning (not by gas)	1
182	Accidental mechanical suffocation	2
183	Accidental drowning	5
184	Accidental injury by firearms	4
186	Accidental injury by fall, crushing, landslide, etc.	1
193	Other accidents due to electric currents	5
195	Other accidents	9
	XVIII.—*Ill-defined Causes of Death.*	
200	Causes of death unstated or ill-defined	21
	Total	821

TABLE D.

ADMISSIONS TO GOVERNMENT HOSPITALS, 1948.

Hospital	European	Native V.D.	Natives other than V.D.	Total	Deaths: European	Deaths: Native V.D.	Deaths: Natives other than V.D.
Salisbury	3,669	—	8,356	12,025	142	—	527
Bulawayo	5,081	—	9,916	14,997	132	—	618
Bindura	288	83	2,208	2,579	8	—	72
Enkeldoorn	238	16	1,074	1,328	6	—	48
Fort Victoria	444	318	1,728	2,490	12	3	99
Gatooma	916	840	3,961	5,717	12	—	204
Gwanda	132	240	2,288	2,660	4	3	68
Gwelo	942	402	2,663	4,007	25	4	136
Marandellas	194	—	—	194	2	—	—
Que Que	519	522	1,878	2,919	10	12	107
Rusapi	332	470	2,105	2,907	7	2	72
Selukwe	316	—	—	316	5	—	—
Shamva	8	768	933	1,709	—	9	33
Sinoia	254	325	1,492	1,071	2	1	78
Umtali	1,333	—	3,800	5,133	36	—	143
TOTAL	14,666	3,984	42,402	61,052	403	34	2,205
Ingutsheni	121	—	255	376	18	—	81
Nervous Disorders	256	—	—	256	1	—	—
GRAND TOTAL	15,043	3,984	42,657	61,684	422	34	2,286

TABLE E.

OUTPATIENT ATTENDANCES (EXCLUDING VENEREAL DISEASE), GOVERNMENT HOSPITALS, 1948.

Hospital	European	Coloured and Native	Total
Salisbury	29,162	137,137	166,299
Bulawayo	10,404	90,118	100,522
Bindura	665	5,186	5,851
Enkeldoorn	753	1,774	2,527
Fort Victoria	3,663	14,825	18,488
Gatooma	828	4,695	5,523
Gwanda	644	5,150	5,794
Gwelo	2,045	9,065	11,110
Marandellas	370	—	370
Que Que	310	1,063	1,373
Rusapi	336	5,173	5,509
Selukwe	301	—	301
Shamva	90	4,275	4,365
Sinoia	34	9,617	9,651
Umtali	607	26,174	26,781
TOTAL	50,212	314,252	364,464

TABLE F.

FREE PATIENTS MAINTAINED IN GOVERNMENT HOSPITALS, 1948.

Hospital	Number of Patients: European	Number of Patients: Coloured and Natives	Number of Patients: Total	Number of In-Patient Units: European	Number of In-Patient Units: Coloured and Natives	Number of In-Patient Units: Total
Salisbury	465	7,859	8,324	9,267	94,397	103,664
Bulawayo	454	9,460	9,914	9,597	106,035	115,632
Bindura	19	2,189	2,208	201	16,396	18,597
Enkeldoorn	40	1,130	1,170	426	23,548	23,974
Fort Victoria	64	1,715	1,779	473	17,504	17,977
Gatooma	165	3,956	4,121	1,390	49,149	50,539
Gwanda	10	2,080	2,090	213	38,229	38,442
Gwelo	166	2,717	2,883	1,552	31,723	33,275
Marandellas	19	—	19	164	—	164
Que Que	31	1,721	1,752	297	31,560	31,857
Rusapi	39	2,201	2,240	267	29,783	30,050
Selukwe	44	—	44	572	—	572
Shamva	—	1,701	1,701	—	27,220	27,220
Sinoia	13	1,471	1,484	85	16,770	16,855
Umtali	91	3,636	3,727	787	61,978	62,765
TOTAL	1,620	41,836	43,456	25,291	543,842	569,133
Ingutsheni	143	604	747	30,478	182,545	213,023
Nervous Disorders	80	—	80	920	—	920
GRAND TOTAL	1,843	42,440	44,283	56,689	726,387	783,076

STAFFING, BEDS AND PATIENTS OF GOVERNMENT HOSPITALS (EXCLUDING VENEREAL DISEASE), 1948.

Hospital	Nursing Staff		Number of Beds		Number of In-patients (a)			Daily Average of In-patients			Number of In-patient Units Maintained			Average Stay in Hospital in Days	
	European	Native	European	Coloured and Native	European	Coloured and Native	Total	European	Coloured and Native	Total	European	Coloured and Native	Total	European	Coloured and Native
Salisbury	107	38	139	232	3,793	8,600	12,393	134·0	275·2	409·2	49,063	100,726	149,789	12·9	11·7
Bulawayo	119	95	228	330	5,186	10,196	15,382	153·6	325·2	478·8	56,235	119,008	175,243	10·8	11·7
Bindura	6	8	11	25	290	2,246	1,536	4·7	49·5	54·2	1,740	18,134	19,874	6·0	8·1
Enkeldoorn	6	9	14	45	242	1,135	1,377	6·1	65·3	71·4	2,241	23,887	26,128	9·3	21·0
Fort Victoria	6	12	24	37	450	1,770	2,220	8·2	47·9	56·1	3,012	17,550	20,562	6·7	9·9
Gatooma	15	26	40	120	926	4,107	5,033	20·0	149·5	169·5	7,341	54,728	62,069	7·9	13·3
Gwanda	5	10	8	84	133	2,401	2,534	2·8	112·4	115·2	1,036	41,126	42,162	7·8	17·1
Gwelo	15	19	56	64	956	2,749	3,705	25·0	87·2	112·2	9,142	31,917	41,059	9·6	11·6
Marandellas	4	—	6	—	200	—	200	3·6	—	3·6	1,317	—	1,317	6·6	—
Que Que	10	14	10	56	531	1,878	2,409	8·4	103·3	111·7	3,068	37,802	40,870	5·8	20·1
Rusapi	6	7	13	32	336	2,201	2,537	5·3	81·4	86·7	1,948	29,799	31,747	5·8	13·5
Selukwe	4	—	10	—	323	—	323	7·1	—	7·1	2,594	—	2,594	8·0	—
Shamva	2	4	7	75	8	961	969	0·1	74·4	74·5	33	27,220	27,253	4·1	28·3
Sinoia	6	13	10	60	259	1,528	1,787	4·8	53·5	58·3	1,769	19,578	21,347	6·8	12·8
Umtali	17	30	38	98	1,363	3,979	5,342	28·2	178·9	207·1	10,328	65,470	90,612	7·6	16·4
TOTAL	328	285	614	1,258	14,996	43,751	58,747	412·2	1603·7	2015·9	150,867	586,945	737,812	10·0	13·4
Ingutsheni	43	76	128	391	284	900	1,184	137·7	573·9	711·6	50,387	210,039	260,426	177·4	233·8
Nervous Disorders	6	—	23	—	266	—	266	11·7	—	11·7	4,302	—	4,302	16·2	—
GRAND TOTAL	377	361	765	1,649	15,546	44,651	60,197	561·6	2177·5	2739·1	205,556	796,984	1,002,540	13·2	17·8

(a) Includes patients in hospital on 1st January, 1948.

ADMISSIONS TO GOVERNMENT HOSPITALS, 1948, OF CASES OF MALARIA, BLACKWATER FEVER, DYSENTERY, PNEUMONIA, TYPHOID FEVER AND SCURVY.

Hospital	Malaria				Blackwater Fever				Dysentery				Pneumonia				Typhoid Fever				Scurvy			
	European		Coloured and Native		European		Coloured and Native		European		Coloured and Native		European		Coloured and Native		European		Coloured and Native		European		Coloured and Native	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Salisbury	111	3	148	7	1	—	—	—	20	—	6	1	138	5	538	65	10	—	22	8	—	—	4	—
Bulawayo	270	7	708	24	—	—	—	—	120	—	103	8	148	11	467	113	6	—	69	14	—	—	17	—
Bindura	71	1	84	5	—	—	—	—	1	—	9	—	5	—	42	6	—	—	2	1	—	—	1	—
Enkeldoorn	13	—	71	1	—	—	—	—	8	—	8	1	16	1	55	6	—	—	1	1	—	—	—	—
Fort Victoria	155	2	306	15	3	—	—	—	6	—	11	3	8	—	48	17	3	1	1	—	—	—	1	—
Gatooma	191	3	412	15	—	—	1	—	6	—	37	2	17	1	223	20	1	—	1	1	1	—	43	—
Gwanda	14	—	175	3	—	—	—	—	2	—	20	1	—	—	49	2	—	—	5	—	—	—	8	—
Gwelo	60	—	157	—	—	—	—	—	44	—	45	6	35	2	233	23	1	—	3	—	—	—	—	—
Marandellas	22	—	—	—	—	—	—	—	4	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—
Que Que	61	—	138	13	—	—	—	—	18	—	7	1	30	1	49	10	1	—	1	—	—	—	3	—
Rusapi	63	—	118	7	—	—	—	—	7	2	10	—	4	1	99	21	—	—	5	—	—	—	4	—
Selukwe	27	—	—	—	—	—	—	—	—	—	—	—	31	2	—	—	2	—	—	—	—	—	—	—
Shamva	4	—	60	5	—	—	—	—	—	—	27	4	—	—	46	5	—	—	—	—	—	—	—	—
Sinoia	22	1	77	3	—	—	—	—	4	—	10	—	14	—	86	6	—	—	8	3	—	—	20	—
Umtali	103	—	187	10	—	—	—	—	13	1	18	—	18	2	107	20	5	2	16	4	—	—	—	—
TOTAL	1,187	17	2,641	108	4	—	1	—	253	3	311	27	471	26	2,042	314	29	3	134	32	1	—	101	—

Mission	Admissions			In-patient Units			Deaths			Out-patients			Out-patient Attendances		
	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total	V.D.	Other	Total
All Souls', Mtoko	685	5,800	6,485	3,156	12,333	15,489	3	16	19	522	6,280	6,802	7,310	52,052	59,362
American Board, Mt. Selinda (*a*)	38	956	994	839	11,212	12,051	1	27	28	35	3,062	3,097	318	5,805	6,123
Chikore (*a*)	6	445	451	37	3,485	3,522	—	8	8	10	2,021	2,031	50	2,996	3,046
Chishiwasha	2	239	241	14	2,151	2,165	—	2	2	21	6,473	6,494	125	14,099	14,224
Dreifontein	—	236	236	—	1,243	1,243	—	4	4	—	1,040	1,040	—	1,282	1,282
Empendeni (*b*)	2	435	437	46	5,129	5,175	—	2	2	560	21,653	22,213	1,942	26,664	28,606
Epworth (*b*)	—	—	—	—	—	—	—	—	—	4	760	764	16	8,149	8,165
Gokomere	—	95	95	—	784	784	—	—	—	912	16,120	17,032	1,697	34,300	35,997
Gutu (*a*)	—	482	482	—	3,179	3,179	—	14	14	97	16,934	17,031	807	23,213	24,020
Howard Institute	30	555	585	260	2,344	2,604	—	3	3	36	2,621	2,657	396	9,894	10,290
Lower Gwelo	90	898	988	735	6,374	7,109	1	19	20	1,029	4,961	6,010	4,367	7,828	12,195
Manana (*b*)	543	197	737	11,592	6,096	17,688	—	6	6	153	76	229	1,063	2,289	3,352
Masase (*b*)	1,617	423	2,040	38,808	8,478	47,286	—	16	16	286	263	549	2,082	1,315	3,397
Matopo	296	139	435	1,523	7,654	9,177	2	1	3	148	1,504	1,652	296	1,769	2,065
Mbembeswana	—	252	252	—	1,773	1,773	—	4	4	—	2,999	2,999	—	3,911	3,911
Mnene (*a*)	1,638	2,409	4,047	38,913	51,659	90,572	4	70	74	339	1,441	1,780	2,530	3,351	5,881
Morgenster (*a*)	—	1,801	1,801	—	22,058	22,058	—	80	80	765	9,372	10,137	—	—	50,145
Msengedzi	—	285	285	—	4,499	4,499	—	3	3	—	4,398	4,398	—	4,810	4,810
Mtshabesi (*b*)	244	591	835	4,880	5,855	10,735	1	4	5	20	2,290	2,310	120	15,590	15,710
Mutambara	115	682	797	3,454	8,269	11,723	4	6	10	570	2,597	3,167	6,430	13,091	19,521
Nyaderi (*b*)	163	2,171	2,334	345	21,737	22,082	1	38	39	100	2,079	2,179	752	12,644	13,396
Old Umtali	10	484	494	179	5,829	6,008	—	5	5	181	1,001	1,182	1,658	3,979	5,637
Rusitu	10	154	164	152	2,000	2,152	—	2	2	76	1,752	1,828	228	6,679	6,907
St. Augustine's, Penhalonga (*a*)	—	—	—	—	—	—	—	—	—	94	5,304	5,398	1,080	16,813	17,893
St. Barbara's, Rusapi (*b*)	211	851	1,062	2,139	10,221	12,360	3	7	10	30	5,972	6,002	178	18,378	18,556
St. David's, Bonda (*a*)	531	2,376	2,907	22,982	6,594	29,576	—	26	26	389	2,093	2,482	2,647	6,026	8,673
St. Faith's, Rusapi	—	—	—	—	—	—	—	—	—	39	7,039	7,078	39	7,154	7,193
St. Joseph's, Chatsworth	—	—	—	—	—	—	—	—	—	275	11,950	12,225	2,325	20,100	22,425
St. Paul's, Mrewa	13	384	397	172	3,224	3,396	1	14	15	226	9,352	9,578	733	19,582	20,315
Silviera (*a*)	32	314	346	611	2,339	2,950	2	7	9	243	9,075	9,318	634	22,221	22,855
Solusi	—	60	60	—	420	420	—	3	3	895	832	1,727	4,631	3,234	7,865
Triashill (*b*)	133	865	998	2,105	10,277	12,382	3	10	13	295	7,298	7,593	1,965	16,793	18,758
Waddilove	—	565	565	—	5,752	5,752	—	10	10	—	5,400	5,400	—	13,231	13,231
Zambesi (*a*)	—	2	2	—	12	12	—	—	—	—	1,037	1,037	—	3,998	3,998
TOTAL (34)	6,409	25,146	31,555	132,942	232,980	365,922	26	407	433	8,124	177,049	185,173	46,419	403,240	449,659

(*a*) Resident Medical Practitioner. (*b*) Visiting Medical Practitioner.

MATERNITY HOMES, 1948.

TABLE J.

Name of Home	Town	Patients remaining 1.1.48	Admitted	Died	Patients remaining 31.12.48	Confinements	Births		Deaths of Infants	Miscarriages and Abortions	Operations		Equipped Beds
							Live	Still			Major	Minor	
Lady Chancellor	Salisbury	23	1,071	1	20	1,008	1,002	18	17	1	45	428	37
Lady Rodwell	Bulawayo	15	735	1	25	651	657	4	8	2	21	246	29
Birchenough	Gwelo	3	174	1	6	158	156	4	1	—	11	14	9
Umtali	Umtali	10	240	—	7	223	222	5	2	—	3	34	10
Fort Victoria	Fort Victoria	—	74	—	1	64	61	3	1	—	—	22	6
Appelby	Bindura	—	36	—	1	33	33	—	1	—	1	—	3
Que Que	Que Que	3	73	—	1	72	72	1	—	1	—	1	3
Enkeldoorn	Enkeldoorn	—	28	1	—	28	28	—	1	—	—	—	5
Donaldson	Selukwe	4	44	—	2	39	36	2	1	—	—	—	5
Sinoia	Sinoia	2	46	—	—	41	40	1	—	—	1	—	2
Total Government operated Homes (10)		60	2,521	4	63	2,317	2,307	38	32	4	83	745	109
Clarison	Bulawayo	1	131	—	4	128	125	3	3	—	—	—	7
Queen Mary	Gatooma	3	113	—	3	100	99	1	2	—	—	—	7
Total privately operated Homes (2)		4	244	—	7	228	224	4	5	—	—	—	14
GRAND TOTAL (12)		64	2,765	4	70	2,545	2,531	42	37	4	83	745	123

EUROPEAN SCHOOLS Routine Medical Examinations	Children Born in Group 1, 1941	Group 2, 1939	Group 3, 1937	Group 4, 1935	Group 5, 1933	Group 6, 1931	Total	Percentage
Number Examined	1,880	1,836	1,685	1,536	1,127	375	8,439	—
Nutrition Standard (Board of Education Classification): A	319	406	530	701	801	310	3,067	36·3
B	1,245	1,140	963	707	309	64	4,428	52·5
C	308	282	189	125	17	1	922	10·9
D	8	8	3	3	—	—	22	0·3
Skin Diseases	70	57	52	52	32	17	280	3·3
Defective Vision:								
(1) Requiring Treatment	22	55	82	73	60	20	312	3·7
(2) For Observation	129	131	111	99	69	16	555	6·6
(3) Treatment Obtained	21	41	68	103	90	55	378	4·5
Squint	17	11	14	6	7	3	58	0·7
Other Eye Conditions	73	68	50	45	23	9	268	3·2
Defective Hearing:								
(1) History of Otitis Media	21	17	11	15	8	6	78	0·9
(2) Adenoids	2	1	—	1	—	—	4	0·05
(3) Other Causes	20	13	19	18	17	2	89	1·05
Active Otitis Media	7	3	4	6	4	—	24	0·3
Tonsils and Adenoids:								
(1) Enlarged	127	111	91	58	26	5	418	4·9
(2) Removal Advised	23	18	18	13	5	2	79	0·9
(3) Removed Previously	523	617	647	640	495	155	3,077	36·6
Teeth	78	79	100	91	85	18	451	5·3
Heart—Organic Disease:								
(1) Rheumatic	2	—	4	1	1	1	9	0·1
(2) Other Causes	7	9	3	8	7	—	34	0·4
Functional Disease:								
(1) Murmurs	11	13	9	8	11	2	54	0·6
(2) Other Conditions	1	2	1	4	1	—	9	0·1
Lungs:								
(1) Bronchitis	49	24	30	10	5	3	121	1·4
(2) Asthma	5	11	7	7	5	3	38	0·4
Postural Defects:								
Spinal	386	449	404	319	154	35	1,747	20·7
Flat Feet	328	350	350	305	196	44	1,573	18·6
Deformities:								
Knock Knees and Bow Legs	138	112	93	70	36	3	452	5·3
Other Deformities	28	38	20	35	33	7	161	1·9
Enlarged Spleen	6	9	6	3	4	4	32	0·4
Nervous Diseases	5	7	6	4	5	2	29	0·3
Nervous Disorders	19	10	11	2	4	2	48	0·6
Speech	9	6	2	5	6	2	30	0·3
Other Conditions	89	101	85	87	41	14	417	4·9

FINDINGS OF SCHOOL MEDICAL INSPECTION, 1948.

TABLE L.

COLOURED AND INDIAN SCHOOLS Routine Medical Examinations	Children Born in Group 1, 1941	Group 2, 1939	Group 3, 1937	Group 4, 1935	Group 5, 1933	Group 6, 1931	Total	Percentage
Number Examined	277	278	271	263	180	41	1,310	—
Nutrition Standard (Board of Education Classification): A	10	20	28	67	75	30	230	17·5
B	148	158	170	149	90	9	724	55·5
C	101	86	67	47	15	2	318	24·2
D	18	14	6	—	—	—	38	2·8
Skin Diseases	27	20	23	28	5	2	105	8·0
Defective Vision:								
(1) Requiring Treatment	1	1	5	8	3	2	20	1·5
(2) For Observation	11	19	12	16	9	3	70	5·3
(3) Treatment Obtained	—	1	2	4	5	—	12	0·9
Squint	1	2	1	1	2	—	7	0·5
Other Eye Conditions	7	5	6	6	5	—	29	1·45
Defective Hearing:								
(1) History of Otitis Media	—	2	2	4	1	1	10	0·75
(2) Adenoids	—	—	—	—	—	—	—	—
(3) Other Causes	5	4	6	3	—	2	20	1·5
Active Otitis Media	2	1	2	2	1	—	8	0·6
Tonsils and Adenoids:								
(1) Enlarged	29	24	18	17	8	—	96	7·3
(2) Removal Advised	3	3	4	3	2	—	15	1·2
(3) Removed Previously	9	13	18	24	13	5	82	6·2
Teeth	14	19	18	19	28	3	101	7·7
Heart—Organic Disease:								
(1) Rheumatic	—	1	1	—	—	—	2	0·15
(2) Other Causes	—	1	3	2	1	—	7	0·5
Functional Disease:								
(1) Murmurs	2	4	1	4	3	1	15	1·2
(2) Other Conditions	—	1	—	—	—	—	1	0·07
Lungs:								
(1) Bronchitis	16	3	9	—	—	—	28	2·1
(2) Asthma	—	—	1	—	—	—	1	0·07
Postural Defects:								
Spinal	56	52	73	64	41	6	292	22·2
Flat Feet	23	21	45	35	37	3	164	12·3
Deformities:								
Knock Knees and Bow Legs	15	10	9	9	10	1	54	4·1
Other Deformities	5	6	4	6	3	1	25	1·9
Enlarged Spleen	3	3	4	8	1	—	19	1·5
Nervous Diseases	—	1	2	—	—	—	3	0·2
Nervous Disorders	—	1	—	—	—	—	1	0·07
Speech	—	1	1	—	1	—	3	0·2
Other Conditions	33	21	9	8	7	2	80	6·0

AFRICAN SCHOOLS Routine Medical Examinations	Children Born in Group 1, 1941	Group 2, 1939	Gropu 3, 1937	Group 4, 1935	Group 5, 1933	Group 6, 1931	Total	Percentage
Number Examined	242	260	330	316	185	51	1,384	—
Nutrition Standard (Board of Education Classification): A	5	7	18	61	60	25	176	12·7
B	146	180	208	175	95	19	823	60·6
C	81	69	99	73	25	7	354	25·5
D	10	4	5	7	5	—	31	1·2
Skin Diseases	76	79	83	42	28	7	315	22·2
Defective Vision:								
(1) Requiring Treatment	—	—	1	3	1	—	5	0·35
(2) For Observation	5	10	16	16	18	8	73	5·11
(3) Treatment Obtained	—	—	—	—	—	1	1	0·07
Squint	2	1	—	1	2	1	7	0·49
Other Eye Conditions	13	7	11	6	5	—	42	2·94
Defective Hearing:								
(1) History of Otitis Media	—	—	—	—	—	—	—	—
(2) Adenoids	—	—	—	—	—	—	—	—
(3) Other Causes	—	—	—	—	2	—	2	0·14
Active Otitis Media	—	1	—	—	—	—	1	0·07
Tonsils and Adenoids:								
(1) Enlarged	—	—	—	—	—	—	—	—
(2) Removal Advised	—	—	—	—	—	—	—	—
(3) Removed Previously	—	—	—	—	—	—	—	—
Teeth	—	—	—	—	—	—	—	—
Heart—Organic Disease:								
(1) Rheumatic	1	2	—	1	1	1	6	0·42
(2) Other Causes	3	—	1	2	—	2	8	0·56
Functional Disease:								
(1) Murmurs	—	—	—	—	—	—	—	—
(2) Other Conditions	10	6	7	4	2	—	29	2·03
Lungs:								
(1) Bronchitis	—	—	—	—	—	—	—	—
(2) Asthma	—	—	—	1	—	—	1	0·07
Postural Defects:								
Spinal	—	—	—	—	—	—	—	—
Flat Feet	—	—	—					
Deformities:								
Knock Knees and Bow Legs	—	1	1	2	1	4	9	0·63
Other Deformities	1	1	3	4	2	2	13	0·91
Enlarged Spleen	12	15	17	6	1	2	53	3·9
Nervous Diseases	—	—	2	—	2	—	4	0·28
Nervous Disorders	—	—	—	—	—	—	—	—
Speech	—	—	—	—	—	—	—	—
Other Conditions	73	54	51	42	14	8	242	16·94

REPORT OF THE PUBLIC HEALTH LABORATORY, SALISBURY.

BLOOD.

	European.	Non-European.	Total.
Microscopical—			
Blood counts, etc	9,330	1,553	10,883
Blood films for parasites	2,664	2,928	5,592
P. falciparum	101	188	
P. vivax	1	—	
P. malariae	4	1	
Trypanosomes	—	8	
Filaria	—	7	
Spirochaetes	—	16	
Leishmania	2	—	
Cultural—			
Blood cultures performed	184	141	325
Salmonella group	12	17	
Brucella group	2	—	
Other organisms	4	7	
Serological—			
Agglutination tests	419	642	1,061
Salmonella group	74	92	
Brucella group	18	23	
Other organisms	30	10	
Serological tests for syphilis	1,134	18,773	19,907
Gonococcal complement fixation tests	3	—	3
Grouping—Landsteiner	593	38	631
Grouping—Rhesus	75	3	78
Biochemical—			
Estimations performed	1,166	387	1,553
Miscellaneous—			
Sedimentation rates, Fragility curves, Spectroscopic examinations, etc.	311	117	428

URINE.

Chemical examinations	2,405	2,749	5,154
Centrifuged deposits examined	6,830	8,681	15,511
Centrifuged deposits cultured	865	115	980
Reducing substances investigated	2	—	2
Miscellaneous examinations	3	—	3

SPUTUM.

Microscopical—			
Unstained preparations examined	6	3	9
Stained films examined	854	993	1,847
Bacteriological—			
Specimens cultured	50	3	53

FAECES.

Direct or concentrated films	5,259	7,619	12,878
Positive findings—			
S. mansoni	73	623	
S. haematobium	5	74	
E. histolytica, trophozoites	52	23	
E. histolytica, cysts	27	11	
Miscellaneous parasites	285	1,238	
Bacteriological—			
Specimens cultured	373	158	531
Chemical—			
Estimations or tests performed	177	3	180

Cerebro-Spinal Fluid.

	European.	Non-European.	Total.
Routine chemical examinations	183	456	639
Routine bacteriological examinations	90	200	290
Streptococcus	—	10	
Neisseria	23	2	
Haemophilus	—	5	
Wassermann reactions	14	38	52

Pus, Exudates, Puncture Fluids, etc.

Microscopical—			
Examinations performed	872	1,386	2,258
Culture—			
Specimens cultured—Bacteria	848	375	1,223
Specimens cultured—Fungi	1	—	1
Chemical—			
Qualitative or quantitative examinations performed	—	11	11

Autogenous Vaccines.

Number prepared	14	1	15

Animal Inoculations.

Friedman tests	122	5	127
Virulence tests	29	11	40
C. diphtheriae	9	3	
Myco. tuberculosis	20	8	

Histological Examinations.

Number of sections examined	371	675	1,046

Medico-Legal Examinations.

Smears for spermatozoa, blood groups, etc.	—	27	27

Miscellaneous Tests.

Ice Cream	27
Waters	185

Autopsies.

Number performed	52	504	556
Estimations Performed	35,327	48,597	83,924

UMTALI LABORATORY.

Blood.

	European.	Non-European.	Total.
Microscopical—			
Blood counts, etc.	451	216	667
Blood films for parasites	461	995	1,456
Serological—			
Agglutination tests	123	35	158
Grouping—Landsteiner	29	31	60
Biochemical—			
Estimations performed	12	12	24
Miscellaneous—			
Sedimentation rates, Fragility curves, Spectroscopic examinations, etc.	102	62	164

Urine.

Chemical examinations	368	1,724	2,092
Centrifuged deposits examined	1,038	2,614	3,652
Centrifuged deposits, cultured	15	36	51

	European.	Non-European.	Total.
Sputum.			
Microscopical—			
Stained films examined	44	165	209
Faeces.			
Direct or concentrated films	725	3,567	4,292
Chemical—			
Estimations or tests performed	15	3	18
Cerebro-Spinal Fluid.			
Routine chemical examination	8	29	37
Routine bacteriological examination	14	15	29
Pus, Exudates, Puncture Fluids, etc.			
Microscopical—			
Examinations performed	93	416	509
Chemical—			
Qualitative or quantitative examinations performed	43	2	45
Estimations Performed	3,541	9,922	13,463

Appendix O.

REPORT OF THE PUBLIC HEALTH LABORATORY, BULAWAYO.

	European.	Non-European.	Total.
Blood.			
Microscopical—			
Blood counts, etc.	2,673	1,512	4,185
Blood films for parasites	1,498	3,039	4,537
P. falciparum	215	536	751
P. vivax	7	22	29
P. malariae	1	—	1
P. ovale	—	—	—
Trypanosomes	—	—	—
Filaria	—	1	1
Spirochaetes	1	43	44
Leishmania	—	—	—
Cultural—			
Blood cultures performed	104	226	330
Salmonella group	5	46	51
Brucella group	—	—	—
Other organisms	5	5	10
Serological—			
Agglutination tests	235	979	1,214
Salmonella group	28	124	152
Brucella group	6	1	7
Other organisms	2	—	2
Serological tests for syphilis	716	18,493	19,209
Positive reactions	80	8,287	8,367
Gonococcal Complement fixation tests	2	—	2
Positive reactions	—	—	—
Grouping—Landsteiner	163	149	312
Grouping—Rhesus	27	—	27
Biochemical—			
Estimations performed	711	143	854
Miscellaneous—			
Sedimentation rates, Fragility curves, Spectroscopic examinations, etc.	566	85	651

	European.	Non-European.	Total.
URINE.			
Chemical examinations	1,931	4,740	6,671
Centrifuged deposits examined	3,629	6,309	9,938
Centrifuged deposits cultured	1,479	529	2,008
Reducing substances investigated	1	4	5
Miscellaneous examinations	19	—	19
SPUTUM.			
Microscopical—			
Unstained preparations examined	30	50	80
Stained films examined	703	2,290	2,993
Bacteriological—			
Specimens cultured	47	1	48
FAECES.			
Direct or concentrated films	3,035	4,195	7,230
S. mansoni	1	70	71
S. haematobium	—	2	2
E. histolytica, trophozoites	48	58	106
E. histolytica, cysts	18	45	63
Miscellaneous findings	92	254	346
Bacteriological—			
Specimens cultured	520	652	1,172
Salmonella organisms isolated	3	9	12
Shigella organisms isolated	15	6	21
Miscellaneous organisms	5	1	6
Chemical—			
Estimations or tests performed	74	—	74
CEREBRO-SPINAL FLUID.			
Routine chemical examination	95	273	368
Routine bacteriological examination	31	105	136
Streptococcus	3	10	13
Neisseria	—	9	9
Haemophilus	2	2	4
Wassermann reactions	33	140	173
Positive reactions	1	14	15
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Examinations performed	578	446	1,024
Culture—			
Specimens cultured—Bacteria	1,143	1,018	2,161
Specimens cultured—Fungi	13	7	20
Chemical—			
Qualitative or quantitative examinations performed	13	30	43
AUTOGENOUS VACCINES.			
Number prepared	38	1	39
ANIMAL INOCULATIONS.			
Friedman tests	27	2	29
Virulence tests—			
C. diphtheriae	5	—	5
Myco. tuberculosis	12	8	20
POST-MORTEM EXAMINATIONS.			
Number performed	28	—	28

Histological Examinations.

	European.	Non-European.	Total.
Surgical pathology	451	188	639
Post-mortem pathology	14	179	193

Medico-Legal Examinations.

Smears for spermatozoa, blood groups, etc.			33

Miscellaneous Tests.

Fractional test meals	78	—	78
Bilharzia skin tests	481	—	481
Asthma skin tests	74	—	74
Seminal fluids	23	1	24
Hydatid skin test	1	—	1
Cancer cells (examination of sputum and exudates for)	16	1	17
Penicillin sensitivity tests	23	—	23
Waters			178
Miracidiascope	—	756	756
Milks (methylene blue tests)			865
Estimations Performed	21,310	46,614	68,967

GWELO LABORATORY.

Blood.

Microscopical—	European.	Non-European.	Total.
Blood counts, etc.	1,581	714	2,295
Blood films for parasites	148	191	339
P. falciparum	15	30	45
P. vivax	—	—	—
P. malariae	—	—	—
P. ovale	—	—	—
Trypanosomes	—	—	—
Filaria	—	—	—
Spirochaetes	—	—	—
Leishmania	—	—	—
Cultural—			
Blood cultures performed	6	14	20
Salmonella group	2	1	3
Brucella group	—	—	—
Other organisms	—	—	—
Serological—			
Agglutination tests	59	231	290
Salmonella group	21	83	104
Brucella group	—	—	—
Other organisms	—	—	—
Serological tests for syphilis	383	3,582	3,965
Positive reactions	52	1,605	1,657
Gonococcal complement-fixation tests	—	—	—
Positive reactions	—	—	—
Grouping—Landsteiner	3	16	19
Grouping—Rhesus	—	—	—
Biochemical—			
Estimations performed	43	22	65
Miscellaneous—			
Sedimentation rates, Fragility curves. Spectroscopic examinations	6	12	18

	European.	Non-European.	Total.
URINE.			
Chemical examinations	460	1,129	1,589
Centrifuged deposits examined	1,035	2,046	3,081
Centrifuged deposits cultured	124	97	221
Reducing substances investigated	—	—	—
Miscellaneous examinations	—	—	—
SPUTUM.			
Microscopical—			
Unstained preparations examined	—	—	—
Stained films examined	66	531	597
Bacteriological—			
Specimens cultured	—	—	—
FAECES.			
Direct or concentrated films	618	1,234	1,852
S. mansoni	—	18	18
S. haematobium	—	—	—
E. histolytica, trophozoites	23	12	35
E. histolytica, cysts	32	101	133
Miscellaneous findings	6	61	67
Bacteriological—			
Specimens cultured	66	123	189
Salmonella organisms	—	—	—
Shigella organisms	—	2	2
Miscellaneous organisms	—	—	—
Chemical—			
Estimations or tests performed	2	—	2
CEREBRO-SPINAL FLUID.			
Routine chemical examinations	25	46	71
Routine bacteriological examinations	—	1	1
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical—			
Examinations performed	192	221	413
Culture—			
Specimens cultured—Bacteria	192	626	818
Specimens cultured—Fungi	—	—	—
Chemical—			
Qualitative or quantitative examinations performed	2	4	6
MISCELLANEOUS.			
Waters			3
Fractional test meals	4	—	4
ESTIMATIONS PERFORMED	5,014	10,841	15,858

REPORT OF THE GOVERNMENT ANALYST'S LABORATORY, SALISBURY.

NUMERICAL SUMMARY AND ANALYSIS.

Exhibits in connection with Criminal Investigation—		
For presence of poisons	538	
For presence of bloodstains and bloodgrouping	109	
For presence of seminal stains	75	
Miscellaneous forensic exhibits	23	
		745
Samples of Water—		
General analysis of private well, borehole, river and mineshaft supplies	40	
General analysis of supplies to Government establishments, hospitals, police, etc.	11	
General analysis of township supplies	17	
General analysis of purification control and treatment of waters for community supplies	15	
General analysis of corrosive-ferruginous borehole and well waters	12	
Complete mineral study and general analysis of industrial borehole supplies	13	
Analysis of waters for boiler purposes	5	
Special study of water supplies for nature of contamination	4	
Special study of mineral spring type waters	2	
Swimming bath water control	14	
Analysis for purity of distilled water used in oxygen manufacturing processes	3	
		136
Cows' Milk—		
Official samples for conformity to legal standards	128	
Routine samples taken for control analysis	22	
		150
Samples of Dairy Produce—		
Butter, cheese, cream, ice cream and margarine		72
Customs Control—		
Excise samples of wines and spirits	20	
Miscellaneous substances for tariff classification	15	
		35
Skokiaan Samples (Native Fermented Liquors)		1,247
Native Distilled Spirits and Illicit Intoxicants		48
Clinical—		
Human milk specimens	10	
Various specimens from Public Health Laboratories	114	
		124
Drugs examined for Medical Stores		27
Maize Meal Samples		52
Foodstuff Samples		28
Miscellaneous Samples		159
Total		2,823

APPENDIX Q.

REPORT OF RESEARCH LABORATORY.

Research studies included the treatment of a hundred African school children with the new drug, miracil D. This is the first drug to be found effective in bilharziasis when given by mouth. The results are highly promising. Work with this drug is being continued.

Production of cercarial antigen for skin-tests in suspected bilharziasis has gone on throughout the year, and the laboratory has issued antigen to many workers throughout the world. A questionnaire has now been sent to doctors outside the territory who have been using the antigen, asking for their results and impressions.

At the request of the Government Pathologist, an intensive study of tissues from Africans coming to autopsy, by a digestion technique, designed to show the distribution of bilharzia eggs in infected human cases, was carried out. The results showed that eggs could be found in every organ and indeed in muscle and subcutaneous tissue. Work has also continued on improved methods of diagnosis of bilharziasis, and an improved tube-holder for the demonstration of miracidial hatching was devised with the help of Mr. Goodliffe of the Film Unit of the Public Relations Department.

The Laboratory Staff collaborated with Mr. Goodliffe on a film on the African bilharziasis, which is designed for showing to scientific and medical audiences.

Laboratory control has been maintained on the anti-bilharzia measures carried out by the Salisbury Municipality within its area. Advice on control measures has been given to many landowners in the neighbourhood. Snail collections have been carried out throughout the year and many snails have been identified for doctors, farmers and others. A picture is gradually being built up of the habits, infection-rates, etc., of the molluscs responsible for the transmission of bilharziasis in this part of the Colony.

The entomological section of the laboratory has also had to devote much of its time to routine examination of collections, but some research on the use of D.D.T. in local protection has been done, and the results obtained appear to justify the extension of this work to larger areas. In connection with yellow fever investigations, a survey of the Victoria Falls area was made during the year and the position in that district will be continuously kept under review.

A small experiment with paludrine in a native reserve was also begun this year and work is continuing on the examination of blood films from the population there. Blood films collected during routine surveys for malaria parasites and trypanosomes were found in some instances to contain microfilariae and were sent to London to the officer-in-charge for identification. Five cases of infection with *W. bancrofti* were found. It is believed that this is the first definite identification of this parasite in Southern Rhodesia natives, although Blackie found two non-indigenous cases in 1932.

At least one important feature of mosquito distribution is evident as a result of the surveys carried out during the last nine years—*A. funestus*, which may at one time have been the most important malaria-carrier in Southern Rhodesia, has become relatively uncommon in most parts of the country. The reason for this is not known.

Although many problems remain to be elucidated, it is probably safe to say that the mass of data accumulated would justify the inauguration of mass control methods, both in malaria and bilharzia, on a much larger scale than has hitherto been attempted.

	European	*Non-European*	*Total*
URINE			
Chemical examinations	956	243	1,199
Centrifuged Deposits examined	2,265	6,201	8,466
Positive Findings:			
S. haematobium	31	893	
Centrifuged Deposits Cultured	83	28	111
SPUTUM			
Microscopical:			
Stained Films examined	100	665	765
FAECES			
Direct or Concentrated Films	682	4,671	5,353
Chemical:			
Estimations or Tests performed	17	—	17
Positive Findings:			
S. mansoni	7	118	
E. histolytica—trophozoites	—	—	
Miscellaneous Parasites	16	535	
Bacteriological:			
Specimens Cultured	25	15	40
CEREBRO-SPINAL FLUID			
Routine Chemical examinations	36	—	36
Routine Bacteriological	27	182	209
Neisseria	—	12	
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopic:			
Examinations performed	67	192	259
Culture:			
Specimens cultured	72	136	208
MISCELLANEOUS			
Fractional Test Meals	20	—	20
Glucose Tolerance Curves	4	4	8
TOTAL EXAMINATIONS MADE			24,073

REPORT OF THE PUBLIC HEALTH LABORATORY, BULAWAYO

	European	*Non-European*	*Total*
BLOOD			
Microscopical:			
Blood Counts	11,600	3,566	15,166
Blood Films for Parasites	1,769	2,379	4,148
P. falciparum	18	173	
P. vivax	1	—	
P. malariae	—	1	
Filaria	1	2	
Spirochaetes	—	10	
Cultural:			
Blood Cultures Performed	98	100	198
Salmonella Group	1	1	
Other Organisms	7	8	
Serological:			
Agglutination Tests	1,433	2,015	3,448
Salmonella Group	18	23	
Brucella Group	2	—	
Serological Tests for Syphilis	1,472	24,142	25,614
Grouping—Landsteiner	1,097	207	1,304
Grouping—Rhesus	916	60	976
Compatibility Tests	400	50	450
Coombs Tests	257	—	257
Antibody Titrations	244	—	244
Biochemical:			
Estimations performed	1,377	175	1,552
Miscellaneous:			
Sedimentation rates, Fragility curves, Spectroscopic examinations	962	1,062	2,024
URINE			
Chemical examinations	5,472	5,148	10,620
Centrifuged Deposits examined	5,796	6,431	12,227
Centrifuged Deposits cultured	1,692	200	1,892
Miscellaneous examinations	59	9	68
SPUTUM			
Unstained Preparations examined	50	15	65
Stained Films examined	579	4,232	4,811
Bacteriological:			
Specimens Cultured	98	70	168
FAECES			
Direct or Concentrated Films	2,743	2,227	4,970
S. mansoni	1	14	
E. hystolitica—trophozoites	12	10	
cysts	26	12	
Other Parasites	37	84	
Bacteriological:			
Specimens Cultured	337	1,026	1,363
Salmonella Organisms	1	—	
Shigella Organisms	6	—	
Chemical:			
Estimations or Tests performed	95	4	99
CEREBRO-SPINAL FLUID			
Routine Chemical Examinations	126	929	1,055
Routine Bacteriological Examinations	42	136	178
Neisseria	—	43	
Strept. pneumoniae	2	10	
H. influenzae	—	1	
Wasserman Reactions	37	117	154

	European	Non-European	Total
Pus, Exudates, Puncture Fluids, etc.			
Microscopical:			
Examinations performed	1,048	1,209	2,257
Cultural:			
Specimens cultured—bacteria	1,218	1,329	2,547
fungi	54	23	77
Chemical:			
Qualitative or Quantitative Estimations performed	21	29	50
Autogenous Vaccines			
Number prepared	28	—	28
Animal Inoculations			
Virulence Tests:			
Myco. tuberculosis	15	6	21
C. diphtheriae	4	—	4
Post-Mortem Examinations			
Number performed	78	—	78
Histological Examinations			
Sections examined	1,343	677	2,020
Medico-Legal Examinations			
Examinations for Spermatozoa, Blood Stains, etc.	—	—	187
Miscellaneous Tests			
Fractional Test Meals	88	—	88
Seminal Fluid Assay	71	—	71
Malignant Cells in Smears, etc.	36	3	39
Antibiotic Sensitivity Tests	274	60	334
Water Analysis—bacteriological	—	—	426
Milk Analysis—Phosphatase Test	—	—	20
Total Examinations Made	43,029	57,636	101,298

GWELO LABORATORY

	European	Non-European	Total
Blood			
Microscopical:			
Blood Counts, etc.	1,381	80	1,461
Blood Films for Parasites	196	381	577
P. falciparum	10	36	
P. vivax	—	25	
Culture:			
Blood Cultures performed	38	6	44
Salmonella Group	—	—	—
Brucella	—	—	—
Other Organisms	1	1	
Serological:			
Agglutination Tests	114	85	199
Salmonella Group	8	15	
Brucella	4	—	
Other Organisms	5	—	
Serological Tests for Syphilis	342	4,116	4,458
Positive reaction	28	1,518	
Grouping—Landsteiner	123	9	132
Biochemical:			
Estimations performed	72	5	77
Miscellaneous:			
Sedimentation Rates	59	4	63
Paul-Bunnell Reaction	9	—	9
Glucose Tolerance Test	9	—	9
Compatibility	22	2	24
Rhesus Typing	111	7	118
Tests of abnormal Antibodies	15	—	15

	European	Non-European	Total
URINE			
Chemical Examinations	270	255	525
Centrifuged Deposits examined	604	764	1,368
Centrifuged Deposits cultured	127	67	194
Salmonella	—	1	
S. haematobium	10	167	—
Miscellaneous	—	2	2
SPUTUM			
Microscopical:			
Stained Films examined	78	767	845
Bacteriological:			
Specimens cultured	13	—	13
FAECES			
Direct or Concentrated Films	1,674	671	2,345
S. Mansoni	—	1	—
Entamaeba histolytica—trophozoites	194	51	
cysts	40	50	
Miscellaneous Findings	64	37	
Bacteriological:			
Specimens cultured	117	177	294
Salmonella Group	1	1	—
Shigella Group	2	1	
Miscellaneous	4	—	—
Chemical:			
Estimations or Tests performed	17	—	17
CEREBRO-SPINAL FLUID			
Routine Chemical Examinations	54	24	78
Routine Bacteriological Examinations	32	48	80
Strept. pneumoniae	—	1	—
Neisseriae	—	1	—
Kahn Reactions performed	3	2	5
PUS, EXUDATES, PUNCTURE FLUIDS, ETC.			
Microscopical:			
Examinations performed	259	53	312
Culture:			
Specimens cultured	324	76	400
Qualitative or Quantitative Examinations	11	—	11
MEDICO-LEGAL EXAMINATIONS			
Smears for Spermatozoa, Blood Group, Rhesus Typing, etc.	—	9	9
MISCELLANEOUS TESTS			
Water (Aerogenes and Faecal Coli Count)	—	—	30
Other Pathogens	—	—	1
Milk (*Bact. coli* Test)	—	—	1
Food (Bacteriology)	—	—	2
Pregnancy Tests	25	—	25
Semen Analysis	3	2	5
Fractional Test Meals	7	—	7
Sensitivity to Antibiotics	6	—	6
Urea Concentration Test	1	—	1
Urea Clearance Test	1	—	1
TOTAL EXAMINATIONS MADE	6,151	7,612	13,763

REPORT OF THE GOVERNMENT ANALYST

NUMERICAL SUMMARY AND ANALYSIS

Exhibits in connection with Criminal Investigation—		
For presence of poisons	509	
For presence of bloodstains and for blood grouping	126	
For presence of seminal stains	203	
Miscellaneous forensic exhibits (hairs, fibres, paint scrapings, etc.)	63	
	—	901
Samples of Water—		
Private domestic supplies from boreholes, wells, rivers, springs and mine-shafts, etc.	61	
Government establishments, schools, native reserves, etc.	26	
Township supplies, existing and proposed	43	
Community supplies, hotels, etc.	54	
Abnormal waters, for clarification, purification and softening	6	
Corrosive and ferruginous waters	7	
General industrial supplies	19	
Mineral analysis for boiler waters	5	
For evidence of sewage pollution	2	
From swimming baths	12	
Waters suspected of causing illness	11	
Distilled waters	7	
	—	253
Effluents		42
Cows' Milk—		
Official and routine samples for conformity to legal standards		113
Dairy Produce—		
Butter, cream, ice-cream		91
Customs Control—		
Excise samples, wines, liqueurs, spirits, etc.	11	
Miscellaneous samples for tariff classification	47	
	—	58
Illicit Liquors		22
Clinical—		
Various specimens from Public Health Laboratories and private		134
Drugs and chemicals examined for Medical Store and from other sources		21
Maize Meal		18
Foodstuffs		202
Samples from Lloyds' Agents in connection with claims for damage		48
Miscellaneous		587
		2,490
plus Food Technology samples		14
		2,504

The total number of samples shows an increase of 11 per cent. over the total for 1952, this increase being accounted for by one particular investigation involving the examination, testing and grading of a large number of rubber seals for the Southern Rhodesia Air Force.

The number of samples submitted by the Police and C.I.D. was practically the same as that for the previous year.

There was a big increase in the number of waters and effluents analysed, but a considerable decrease in milks and clinical specimens.

The very big increase in miscellaneous samples was largely accounted for by the special investigation mentioned above.

The staff still remains at a total of five, all professional officers. The vacancy on the establishment due to the appointment of Mr. Carr as Food Technologist has not yet been filled. The post was advertised a second time during 1953, but no appointment was made.

The new Laboratory, owing to unforeseen delays, is not yet ready for occupation, but is expected to be completed during February, 1954.

REPORT OF THE RESEARCH LABORATORY

Malaria and Bilharzia Control

Work has continued steadily in the control, or attempted control, of these two diseases. The number of units carrying out malaria control has now been increased to seven, with an eighth supervisor acting as liaison officer to the Laboratory, and in general as a " supervisor of supervisors ". In this connection it should be noted that the technique of the Mazoe Valley project, which was followed during the first few years of insecticide spraying in the Native Reserves, has now been altered. In the Mazoe scheme each European supervisor had a unit of ten Africans, and kept in close touch with their work, indeed he did much of the actual spraying himself. This year the number of Africans under each supervisor has been increased to an average of twenty, and a much more mobile method, which involves a less close supervision, but a much wider scope, has been adopted.

The units are transported to their places of work by their supervisor and work in groups of about five, with the supervisor exercising a watching brief on the different groups, aided in some cases by the Native Health Demonstrators attached to the Reserves in question. In an endeavour to cover a much wider area at a proportionately less cost this year, it is hoped to achieve protection throughout the malaria season by a single application of double-strength benzene hexachloride (BHC), i.e., 2 lb. of 12½ per cent. *gamma* BHC wettable powder per 3 gallons of water, instead of the customary 1 lb. BHC to 3 gallons of water.

There will be little or no saving in BHC but there will be a saving in transport costs if this method proves successful. In addition to the Reserves previously treated, one supervisor has been attached to the Regional Medical Officer of Health (Eastern) and two to the Regional Medical Officer of Health (Western), for ante-malarial spraying; and two new Reserves, Uzumba and Sipolilo have been taken into our orbit. In this way quite a considerable area of Rhodesia is now being protected, and it is to be hoped that a further increase in supervisory staff next year will enable even more protection against malaria to be afforded. It has not been possible to achieve much entomological proof of the efficacy of the insecticide or the spraying, but there is no doubt in the minds of any officials connected with the work, that there has been a tremendous fall in the number of fresh malaria cases occurring in the areas under control. It is noteworthy too that many Native Councils have either initiated, or wish to initiate their own insecticide spraying campaigns, although their reasons for so doing are not always clearly directed against malaria and mosquitoes *per se*.

It is hoped that the appointment of a Senior Supervisor will free the Entomologist, who did much of the organizing of the units last year, for closer entomological studies on the residual spraying effects.

Bilharzia Control

As in previous years copper sulphate has again been the molluscocide of choice, but generous samples of the pentachlorophenates have enabled us to carry out a number of experiments both in the Laboratory and in the field. Very good results have been obtained with these chemicals; one in particular is giving very good lasting molluscocidal effect, and appears *inter alia* to be lethal to some of the water plants on which snails feed and live. The use of such chemicals will almost certainly be governed by the price factor, and if they can be landed in Southern Rhodesia at anything approaching the price of copper sulphate, then their use will have to be most seriously considered.

Trypanosomiasis

Work on Rhodesian Sleeping Sickness has been continued in collaboration with the Physician in charge of the Native Hospital, and a paper which describes the usefulness of Pentamidine in early cases has been prepared for publication.

Bilharziasis

Trials have been carried out during the year:—

(1) A new antimony preparation, sodium tri-antimony-gluconate. The results of giving the drug by mouth were disappointing.

(2) Lucanthone hydrochloride (Miracil D) was again used in a small-scale trial when 67 native children aged between seven years and fourteen years were treated.

They were all suffering from urinary bilharziasis, and were all given the usual treatment, 60 mgms. per kilogram body weight, divided into six doses given morning and evening, for three days. Follow-up tests were carried out for six weeks, at the end of which six children were passing living eggs, and were therefore not cured, while 61 had ceased to pass living eggs. It appears from this, and many similar trials, that there is no reason why this drug should not be used extensively in Southern Rhodesia for the treatment of urinary bilharziasis.

(3) A long-term survey of the incidence of both forms of the disease in children admitted to the Salisbury Native Hospital is being conducted and specimens from every such child have been examined in the last few months.

Lake McIlwaine

A new and at the moment almost immeasurable danger of bilharziasis has arisen near Salisbury, in Lake McIlwaine.

This large expanse of water is becoming more and more popular with the public as a boating, fishing and picnicking spot for the whole family. It is estimated that some 4,000 car-loads of people visit it each week-end. Uncountable numbers of snails, including the two vector species, are present

in the lake, and while the infection-rate in these vectors is at present low, this state of affairs cannot be expected to continue. A mobile laboratory has been set up on the site, a boat has been purchased and a small team is occupied with many cognate investigations on the snail fauna of the lake. There is no previous experience in Southern Rhodesia with really large bodies of water and much of interest will be learned from studies at Lake McIlwaine.

Snail Surveys

There are many gaps in our knowledge of the snail distribution in Southern Rhodesia, and it is obviously important that these lacunae be filled as quickly as is feasible. Two large-scale surveys were therefore carried out during the year, of the riverine systems enclosed in:—

(1) The area bounded by Salisbury, Gatooma, Gwelo, Umvuma, Fort Victoria, Enkeldoorn, Salisbury, and
(2) the Penhalonga, Umtali, Sabi area in the South East.

Nothing of striking importance has risen from these surveys in the shape of new species or remarkable infection rates, but that was not necessarily to be expected and the consolidation of our knowledge of the distribution of the vector snails was the real aim.

A start has been made on a full classification and description of all snails found in Southern Rhodesia, with particular reference to the vector species, which it is hoped to complete in 1954.

World Health Organization

The Laboratory has continued to act, throughout the year, as an Identification Centre of snails submitted from all territories in Central Africa but the amount of material submitted for examination and classification has been disappointing.